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ORIGINAL COMMUNICATIONS.

*THE RELATIONS OF MEDICINE AND MUSIC.**

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NEW YORK.

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AT first sight there would seem to be but little connection between medicine and music.

The science of medicine is divided into many branches, the first two of which are anatomy and physiology. These relate to the structure of the human body, to the study of the physical combinations we call organs of sense, and to the functions of these organs.

Music has to do with hearing; with the voice in singing; with the respiration in playing on wind instruments; and, to carry this no further, with a normal condition of the cerebral nerve-centres, which insures mental operations enough to perform music, or to the hearing thereof.

Anatomy shows us the wonderful structure of the ear, by which we hear the vibrations of the atmosphere set in motion by musical sounds, no matter whence they emanate. It shows the rods of Corti suspended in a liquid medium confined in a curious, whorl-shaped cavity, which is provided with a membranous window on which is a curious chain of bones, the stirrup, the anvil, and the hammer, connecting with the drum of the ear, which lies at the bottom of the external passage. It shows also the two Eustachian tubes that lead from the middle ear to the pharynx. Thanks to modern invention, the rhinoscope displays the pharynx and orifices of the Eustachian tubes.* Anatomy has shown that the rods of Corti are the final media in the ear that transmit vibrations to the nerve-centres, and we are told that the number of 40,000 per second is the highest that can be perceived. Comparative anatomy shows the difference in the organs of hearing in different species of animals.

Anatomy shows the structure of the human larynx, throat, and mouth, that have to do in the production of vocal music, which may be called cantation.

For ages past anatomists have studied the dead organs, and the full significance of the structures was not perceived until a comparatively recent period. A great deal was learned from the dead larynx; but when the laryngoscope was introduced a new flood of light was thrown on the subject, and the difference was shown to be as great as that between life and death.

Physiology is a department of medicine that treats of the functions of the organs of the human body, singly or combined. As the production of vocal music is one of the functions of the air-passages, notably the larynx, so medicine has a good deal to do with music here.

The offices of the true vocal cords or bands, false vocal cords or bands, the epiglottis, the

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*The writer can by means of the rhinoscope see his own Eustachian tubes, either one at will, and he has been in the habit for more than twenty-eight years of demonstrating the same to those interested.

passages through the mouth and nose, the use of the tongue and teeth, are now well known and described.

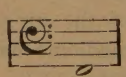
Photography, even, has depicted the living larynx in its actual place and relations, and in action. Czermak, of Prague (about 1862) was the first to photograph it. In November, 1865, the writer took the first photographs in America of the living human larynx (his own). Mr. F. W. Hardy, now of Springfield, Mass., was his skilled assistant. Copies of these photographs are deposited in the U. S. Army Medical Museum, at Washington, D. C. This fact would not now be mentioned here but for the reason that others have claimed priority.*

The literature of this subject is immense, and the medical profession may be said to have worked it up thoroughly and greatly to its credit.

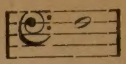
There is one thing interesting as to the function of the false vocal bands, which, as it is not generally known, may be alluded to† briefly here. The false vocal bands close during the act of holding the breath, and are probably the chief agents in retarding the emission of the breath during singing and phonation. This is an important office, and should give these bands a better name than false, for their work is as true as that of the vocal bands themselves. I have named them "breath-bands."

In singing, the tones are produced by the action of the vocal bands alone. These tones are, like the tones of a cornet, produced by the air passing through the lips on the embouchure of the mouth-piece. In "songs without words" the larynx plays like an instrument; but in songs with words the varied tones are modified by the position of the tongue, mouth, and nares, the taking of which position I have called "oripulation."‡ The variations in pitch are governed by the length of the vibrating surface of the vocal bands. For example, in my own case I have demonstrated, when required, to myself and others, the vocal bands vibrating as follows:—

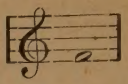
(*a*) Throughout their whole length:



(*b*) Through their anterior two-thirds:

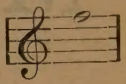


(*c*) Through their anterior third:



The bands, therefore, are subject to the same rule as the strings of a cello.

In the falsetto voice the anterior two-thirds of the vocal bands vibrate very closely together in producing:



Surgery is another department of medicine, and has shown in a striking and decisive way the falseness of the conventional terms used in vocal music, as "head," "chest," and "abdominal" tones.

I have in my possession a tumor which I removed by thyrotomy, in April, 1866, from the vocal bands of Miss Anna M. Jewell, of Pepperill, Mass., where (1890) she now lives, talks, and sings, as she has done for the past twenty-four years. Before that time she could not talk nor sing, only whisper. There were no vocal tones of any kind while this tumor occupied the larynx. Surgery proves that the larynx is the basic organ of the voice,—the indisputable source of phonation and cantation.* The effect of surgery on the tonsils has been reported by Madam Cappiani, of this city, to be disastrous to the human voice. I do not quite agree with this lady. Tonsils are organs the function and office of which are not settled.

Persons exist in a healthy state without any tonsils. They phonate and sing well, too. When they (the tonsils) are enlarged so as to interfere with the respiration, they cause "pigeon breast," as pointed out by my father, the late Dr. Benjamin Cutter, of Woburn, Mass. I have seen such cases cured by excision of the tonsils and by allowing the air freely to penetrate the chest, and relieving the compression of the thorax by the atmospheric pressure during inhalation.

Besides, after the lady above made her statement, another lady teacher of music stated to me that her daughter had had diseased tonsils, which had interfered with her singing so much that on their removal four notes were added to her register. No doubt there may have been

*"Photographing the Larynx," by Ephraim Cutter, M.D., Archives of Laryngology, July, 1882. New York: G. P. Putnam's Sons.

†"Some Practical Points about the False Vocal Bands," by E. Cutter, M.D., Gaillard's Medical Journal, New York, 1884.

‡"Cantation and Phonation," by E. Cutter, M.D., Boston Journal of Chemistry, January and February, 1872.

*E. Cutter, M.D., "Case of Aphonia Cured by Extirpation of a Neoplasm on the Vocal Cords by Laryngotomy," American Journal of Medical Sciences, Philadelphia, 1866. "Sequel to a Case of Thyrotomy in 1866," Archives of Laryngology, New York, October, 1882; Journal American Medical Association, March 29, 1890.

reckless removals of the tonsils, that gave rise to the remark quoted; but, to put it in an unqualified way, that all ablation of diseased tonsils is to be condemned, does not tally with common surgical sense nor with experience. A pigeon-breasted singer would not be a success in the long run.

Medicine shows that perfectly healthy throats are rare, and that vocal music is possible in these cases; but none the less desirable is a healthy throat.

Twin uvulæ are rare, but their presence in a celebrated female singer of this city shows that they do not affect the voice, also the inutility of removing the uvula, unless greatly enlarged.

The surgical removal of exostoses, deviations of the nasal bones, adenoid hypertrophies, dead bones of the nose, enlarged vomers, the pioneer in which is Dr. D. H. Goodwillie, of New York, who first used the surgical engine (principle invented by Jas. Nasmyth, 1829) and devised the very ingenious terminal saws, drills, burrs, etc., are worth considering in this connection of the subject. A clergyman of this city applied to me for relief of an almost disability to preach or sing. I found a deviation of the vomer, the bone which separates the two nostrils. Dr. G. surgically removed the deviation and the disability.

Double Voice.—The laryngoscope shows this to be a neurotic affection. The value of the laryngoscope cannot be overestimated in making out diagnoses of throat diseases, and in the nomenclature of vocal music.

It seems to be as bad to ignore laryngoscopy and to go no further than Dr. Rush, which is done now-a-days, as to confine one's knowledge to the period before 1840 in relation to electricity.

The laryngoscope shows the difference between singing and speaking to be merely a longer vibration of the vocal cords in cantation than in phonation. This has led the writer to suggest elsewhere that some effort be made to apply the rules of singing to speech by those skilled. There is need enough of it, for in responsive reading at church you hear the whole gamut, and our public speakers run aimlessly through the whole scale. Were there more definite rules, speech would be more easy to perform and hear. I hope this suggestion will be heeded, which is to speak in the key-note of the auditorium. Every room has its key-note. Sounds uttered or produced in the key-note vibrate with more ease than any other, and when an instrument is tuned to the same note it will answer back to the key-note of the room where sounded. For example, in 1849 I roomed in college; my classmates near by then will remember how my cello made things noisy, and that they wished me farther off. Now, when I would sound "A" (upper line, base clef) my cello would answer back with the vibrations of the "A" string. Again, lately my son Edward said: "Father, when you play I can feel the floor vibrate under my feet." On examination this note was the "E" flat, base clef; so the key-note of my parlor is "E" flat. Haydn's sonatas in this key sound better than in other keys; so also does speech in the key of "E" flat in this room. At Cincinnati, in 1888, I had occasion to read a paper before a section of the American Medical Association in the Music Hall, seating capacity 6000. The audience was only 200; still, almost instinctively finding the key-note to be "F," I read with ease, got rested while reading for twenty minutes, and I was told the audience heard perfectly.

In 1889, at the Leeds Town-Hall, I was called on to respond to a toast at a banquet of the British Medical Association. Very difficult to hear the speakers preceding; but I struck the key-note, spoke with ease, and several gentlemen, strangers, and advanced in life, thanked me for speaking so they could hear.

It is probable that all successful orators have struck the same idea without knowing why. This is not the place to formulate any rules, but I beg to submit that speaking should be in the chords of the key-note of the auditorium.

If there is difficulty a machine can be made to find it, and then it should be posted where it can be seen.

Peculiar Voices.—We must not laugh at peculiar voices, though funny, for medicine shows that they are usually due to some malformation, as cleft palate (soft and hard), cleft lip, glandular hypertrophies, diseases of the antra of the superior maxillæ, etc., and that such need medical assistance in the broad sense, and special, too.

This leads to remarks on aphonia.

Aphonia, for our purpose, may be considered to cover the loss of voice, whether partial, complete, or altered.

The causes may be either direct or reflex.

Direct.—From affections of the vocal bands

themselves, as, *a*, inflammation of the bands in all degrees; *b*, ulceration or loss of substance; *c*, increase of substance; *d*, loss of white, pearly, sheen color; *e*, new growths in or about the vocal bands,—sarcoma, carcinoma, etc.; *f*, partial or complete paralysis from diseased nerve-centres, from overwork (like writers' cramp), from injudicous use of voice during change of life from childhood to youth; *g*, enlargement of arytenoid cartilages; *h*, thickening of the post-laryngeal wall or anterior œsophageal; *i*, œdema of vocal bands; *j*, croupal or diphtheritic laryngeal deposit; *k*, the presence of foreign bodies, as pins, bristles, false teeth, etc.; to go no further.

When the trouble is direct, the treatment must be addressed to the vocal bands themselves.

Reflex Causes.—This division is very important, for the growth of specialism may tend to the neglect of systemic causes, which act as powerfully as the direct causes, and cannot be ignored if the cure must be had.

All are familiar with the idea that strength of voice goes with strength of body. The voice of a healthy savage is stronger than that of a consumptive civilian.

To make the matter clear, let us divide this part of our subject into—

1. Reflex causes of aphonia connected with the upper air passages, not the vocal bands.

2. Those not connected with the upper air-passages.

1. *Reflexes of the Air-Passages.*—Beginning with the larynx, among them we find: Œdema, thickening and ulceration of the breath-bands, œdema and other complaints of the epiglottis, affections of the arytenoid cartilages, post-pharyngeal wall, pillars of the soft palate, adenoid growths of the vault of the pharynx, nose, antra of frontal and superior maxillary bones, etc.

Specially worth noticing are ulcerations and loss of substance in the pyriform fossæ or gate recesses of the arytenoid cartilages. They are catch-basins of the acrid discharges coming from above. Partly-ulcerated and proliferated conditions of a spot about half an inch square, just behind and above the right tonsil. (This I have found a special focus of cough.) Fibrous, bony, and malignant growths of the pharynx. All these may cause interference with voice in music, and should be treated, while the vocal bands are let alone and get well of themselves. They are weak through sympathy; or, to put it differently, when the diseased parts in question exist, there is so much friction to "run them" that there is not enough force to "run the larynx," and hence the failure of the vocal bands to act.

Years ago I was in the habit of treating the vocal bands by attending to such reflex conditions of the air passages. I remember one case where several high notes were added to a lady's register by treating adenoid growths at the vault of the pharynx.

Lately I saw in the office of Dr. Henry Schweig, of New York, a professional lady whose vocal bands were treated in London and Paris for a loss of four upper notes in her register. By letting the vocal bands alone and touching the adenoid growths in the pharynx, she had regained two of the lost notes, with a prospect of soon recovering the rest. Present report, entire cure.

Coughs may come from any of these causes named, and trouble the singer. There is a parasite, a flagellate infusorium, the Asthmatos ciliaris,* which I have studied for years, found in "la grippe," and which is interesting in this connection. This will affect the voice, and it is easily killed by inhaling menthol, burning sulphur, etc.

Other diseases that affect vocal music include scarlet fever, diphtheria, quinsy, sore throat, croup, false and true pharyngitis sicca, measles, small-pox, syphilis, etc.

2. *Reflex Conditions Causing Aphonia, at a Definite Distance from Upper Air-Passages.*—Among these are affections of the windpipe and vicinage, as inflammation, goitre, aneurism of the aorta, tumors of neck, bronchitis, lung fever, pleurisy, gravel of the lungs, heart disease, to say no more. As well may you expect good organ-playing with bellows out of order, as expect good vocal music with the windpipe and chest diseased.

Reflex causes of aphonia connected with the abdominal cavity. The wonderful changes that come with puberty and eunuchism are proofs of this reflex; but I would like to insist on the uterine influence on the voice, as I am decidedly of the impression, from experience, that this is overlooked too much.

The choleraic voice has been alluded to. A

* E. Cutter, M.D., "Asthmatos Ciliaris," Boston Journal of Chemistry, November, 1878; Virginia Medical Monthly, Richmond, May, 1880; *et al.*

mother will at once detect a change in the voice of her child when connected with the abdominal visceral trouble.*

Reflex diseases of the head, which include all that part of the body above the neck. Among these are affections of the ear—external, internal, and middle. Deaf mutes cannot sing nor play on musical instruments.

When the cerebral nerve centres are diseased, —when there is "sound deafness" as there is "color-blindness,"—locomotor ataxia, fatty degeneration of the muscular coats of the cerebral arteries, organic and functional diseases of the nerves, then the larynx may be affected; though I am glad to learn from Mr. John Eaton, Ex- U. S. Commissioner of Education, that idiots play instruments of music beautifully. This certainly is a good field to explore further. Of course, in wind-instruments, when the wind is derived from the player, the organs of respiration are indispensable. Anatomy shows their structure and physiology shows their functions. The breath bands must be of great use in the playing of wind-instruments, because of their retentive power over the expiring breath.

Effect of Surgery on a Musician in Gilmore's Brass Band, in 1876.—Dr. Lewis A. Sayre, of New York, whose name is known all over the world for his plaster jackets, relates the case of a man, member as above, who was left behind from going to the Centennial Exhibition, stranded in a hospital bed from diseased spinal column. He could not sit up, much less play his wind-instrument. After Dr. Sayre put on his plaster jacket, the man resumed his place in the band and played during the exhibition at Philadelphia.

This leads to the remark about corsets, which oppress natural singing with such restrictions that one is lost in wonder when a prima donna sings, not at the exquisiteness of the performance, but that she can sing at all under such an environment, which makes respiration difficult and unnatural, when it should be easy and natural. Would that dress-makers would follow Dr. Sayre's rule, to put on the corset or jacket with the chest fully expanded, and a big pad over the stomach to allow room for dinner!

Among other reflex causes, I would suggest bad teeth—and false teeth with a rubber basis. I have seen such good results follow from the use of dentures where the teeth and plates are of the same mineral material, as invented by Dr. W. E. Dunn, of New York, that I recommend them to those who have trouble with artificial teeth, and who professionally use the voice. Cases have been known to sing with these dentures who could not with the celluloid and other plates.

All string-instruments require for best development an environment of sound limbs. A broken arm would have kept Ole Bull from playing the violin, and an amputated limb would have ruined G. E. Whiting for the organ. Medicine tells us about the structure and functions of the limbs, and surgery comes in to restore physical defects found in those of performers on musical instruments.

Above all, there should be a clear brain, no matter whether the participator listens or performs. Medical science teaches us the data about this department of our bodies, and so is a handmaid to music.

While there is not much music in medicine, there is a great deal of medicine in music. The effects of David's music on King Saul are well known. Here music was a medicine to a mind that was insane, or bordering on insanity. The domestic history of ordinary families shows how universally infants have been soothed and put to sleep by their mother's nursery songs, which, though repellant to some ears, act like a soothing medicine on the children.

Dr. Benjamin Rush, the most prominent physician in America in his time and perhaps since, in his work on the mind alludes to a case of an insane man being cured by hearing music in church that was a favorite of his mother, long before dead.

Prof. Luther Whiting Mason, of Boston, tells of a man in Buckfield, Me., in the last century, who, crossed in love, with a rope in hand, went to an out-building on his farm to hang himself. As he was going in he noticed a bird singing, and was so much pleased that he noted the melody down, composed a psalm tune and made verses to fit. By this time he thought he would like to hear his choir, which he led, sing it the next Sabbath; so his suicide was indefinitely postponed.

Mr. Thompson, of S. Maw, Son & Thompson, London, told the writer this story of his son Willie, about 6 years of age, when danger-

* E. Cutter, M.D., "The Chest and the Uterus," St. Louis Medical and Surgical Journal, April, 1880; also "The Uterus and the Larynx," read before the American Laryngological Association, 1879; and "Gynic Relations of the Chest," Gynæcological Society of Boston, May, 1890.

ously ill with typhoid. He was almost insensible and could hardly be made to respond to efforts to rouse him. His physician remained with him all one night, but said he would die. Mr. Thompson knew the boy was very fond of music, so he bought a fine music-box and said: "Now, Willie, this is your music-box—your own for yourself." He then placed it behind the boy's back, as he was lying on one side, and set it agoing. It had not played long ere there was an expression flitting on his face: he became uneasy and moved about. After a while he turned over to the music-box, which was again placed behind him. He turned over again; and so on. From this time he began to rally, responded to treatment, and recovered.

In a rather interesting work (I have mislaid) the heroine is taken ill with typhoid fever and grows worse until a nurse who sings is employed, and adds music to her other duties in the night. From this time she rallied, and after her recovery said that the songs of her nurse did her more good than anything else, expressing the intense satisfaction and relief the music gave her. Perhaps it conferred force of a psychic character, which tided her over the dangerous crisis.

A short time ago a California neurologist wrote about music being a curative agent in insanity, following Dr. Rush. Also Dr. Beamer, Superintendent New York State Insane Asylum at Utica, states that weekly concerts are given in different wards as an element of moral treatment which "we cannot afford to neglect."

Dr. Eugene L. Crutchfield, of Baltimore, has published (Gaillard's Med. Journal, August, 1890) an article on the treatment of throat and lung affections by vocal culture. He compiles opinions and facts, some of which are as follow:—

"1. A pupil of Madame Gazzaniga, studying at Milan, Italy, says that vocal culture caused a great expansion of her own chest.

"2. The Boston Musical Herald, September, 1889, says: 'We recall no singer of note who died of consumption. Correct vocal training expands the chest.'"

Remarks.—A big chest is sometimes consumptive, as I have seen, but generally the chest is paralyzed and flattened in consumption.

"3. Jenny Bush Dodge writes, November 18, 1889, 'that correct methods of singing will prevent consumption or throat diseases. I retard these affections if not too far advanced. I never heard of a singer of note dying from consumption. There must be out-door exercise. I have had quite a number of pupils who suffered very much from throat disorders, whom I have cured in a month's time, giving half-hour lessons daily, but not allowing singing at home.'

"4. Carl Formes, the basso, writes: 'San Francisco, December 2, 1889. Years ago I cured a young lady of incipient consumption by letting her exercise her throat and lungs in breathing and singing properly simple sustained tones. In this city I cured two young women of that dread disease. One was so miserable looking, puny a little girl when I first saw her that, as a matter of charity, I taught her, notwithstanding the assurance of her doctor that it was a waste of time for me, as she could not live a year. Singing cured her. Now she is a prima donna. Often my pupils tell me that after even six weeks' lessons their clothing becomes too tight for the chest. Bad singing debilitates. At my present age (74) I am in perfect health.'

"5. Dr. Crutchfield says he did not ask elocutionists because of their faulty methods; but Prof. L. A. Butterfield, Ph.D., tells me that invariably, other things being equal, the health of his pupils improves.

"6. Dr. Seiler, of Phila., says that chronic laryngitis is produced by 'too much breath,—labored or unnatural breathing,—transgression of the natural limits of the voice.'

"7. Dr. M. L. James, Richmond, Va., Oct., 1878, writes: 'The rarity of consumption in the great vocalists suggests singing and performing on wind-instruments as most useful exercises or prophylactics.'

"8. Virgil A. Pinckney, in his 'Essentials of Elocution and Oratory,' says: 'Clergyman's sore throat, in a large majority of cases, is caused by the shock of outgoing unvocalized breath against the tender tissues of a highly-congested throat.'

"9. Dr. I. J. Walker says: 'Habitual over-exertion of the voice produces glandular laryngitis.'"

Remarks.—We can heartily indorse Dr. Crutchfield's dictum, that the time has come when physicians must add vocal culture to their resources in treating consumption, and although we reported 40 cases of cure at the Tenth International Medical Congress, by diet,

had vocal culture been added, no doubt more would have been cured.

Journal Am. Med. Assn., p. 762, Nov. 22, 1890, says: "A new medical club in Boston has been organized for the mutual cultivation of its members in music. It is said that each member is in duty bound to compose some new air for the sick-room."

Mr. Edmund J. Meyer, of New York, lecturer, author, and teacher of voice culture, writes, Nov. 13, 1890: "I have many pupils whose general health has been improved by the breathing and singing exercises I give them. In many cases the chest has been greatly strengthened and expanded. I make this a special point. A singer must have chest expansion and chest strength, and never fail to get it under the training I give when they *think and apply*."

F. L. Dowd, New York, says that "vocal music is an athletic exercise of the best kind; that develops the chest and sends the blood all over the body, making it glow with new life."

Dr. Lewis A. Sayre lately showed the writer a paper with the names of 30 cases, said to be consumptives, which were relieved by simply expanding the lungs by forced breathing through a small tube. This paper was dated 1841.

An extract from a letter to Dr. Cutter, by Professor William Ludden, A.B., member of committee to found a School of Music at Yale, dated October 17, 1890, says: "That the capacity of the human lung can be increased far more rapidly by singing and rhetorical exercises than by athletics requires no argument in my opinion. The latter has chiefly to do with the external muscles and very little with lung capacity, except it may be in rapid running or other violent exercises which compel rapid as well as deep breathing, and always attended with more or less danger to the general health. That chronic sore throats caused by a bad delivery of the voice can be thoroughly cured by a proper voice culture I can testify abundantly."

He also says that thirty years ago the modes of voice culture were ruinous to the voice,—that he was subject to sore throat, inability to sing long, etc.; whereas, on getting hold of proper methods of singing, his cold disappeared, he could sing long, and his voice became stronger. He does not say that all throat evils depend on a faulty vocal culture, but that a good many do. Hence the need of right modes of training.

It is in order for the writer to mention his own case. At the age of 58 he has a symmetrical chest-girth of 40 inches. Although he almost died in infancy and childhood from consumption of the bowels, and was more or less troubled with it till over 50 or more, still he had an intense love and earnest practice of vocal music in college. All through married life (as he married his piano-teacher) he has been engaged in home and church music. So that he now thinks that this vocal culture has had the effect to preserve him from consumption of the lungs, which has been fatal in his family, and which is usually preceded by consumption of the bowels. The writer will renew his vocal culture for the sake of health, this more so as the men of his family have many of them died from heart disease. It is a good thing to have good strong lungs when the heart is weak or diseased. Again, he has found that intestinal commotion can be controlled by singing songs.

He can testify that the methods of vocal culture of Miss Annie Hayden Webster, of Cambridge, Massachusetts, in her own case and those of her pupils seen, which he has indorsed, do result in the physical development of the chest,—a thing to be considered by those who have children or wards to educate. Miss Webster's dictum is, that healthy chests are necessary to perfect vocal culture; that corsets are an evil environment of the chest, and that best results in vocal culture are attained by disuse of corsets.

Mrs. L. T. Smith, a music-teacher of Boston, tells how she was said to be in consumption some twenty years ago, how she went into vocal culture for relief, and how she is now well.

By my introduction she took Miss Webster's tuition, with the reported result of increased girth of chest in a few weeks, so that old dresses do not fit.

Mr. C. L. Woodworth, elocutionist of Johns Hopkins University, has taught these principles about vocal culture for years; indeed, he was Dr. Crutchfield's teacher.

Professor Ludden tells how he had a case of consumption with impaired lung capacity, as shown by physical signs and testified to by her physician. She applied for vocal culture as a means of relief. Prof. L. took her with some fear of hæmorrhage and exercised the greatest care. At first he used only the gentlest sustained tones, and she could only sustain a tone

three seconds. After a time the lung capacity increased and the respiration was heard more fully in the lung. The case recovered and was living after twenty years. Professor Ludden studied medicine as well as music, and his statements are hence more entitled to credence. Judge Converse, of Mass., played the cornet, organizing and leading a brass band for the prevention of consumption in his own case, and succeeded. (Statement of his daughter.)

It is cheaper to sing than to use the so-called "compound oxygen" cures, which are practically compressed air, and at times dangerous, from too much pressure on weak lung-tissues.

Rationale as to Consumption.—1. Vocal culture expands the lungs fully when well done. More oxygen is absorbed.

2. In consumption, according to my best knowledge and belief, the vinegar-yeast, or the mycoderma aceti, is absorbed from the intestines previously in a state of vinegar fermentation from improper feeding. This yeast floats in the blood and will circulate through the lungs for any time within a year before the lungs break down, if the lung-capillaries do not contract on them. If a cold is taken these ung capillaries do contract and detain the masses of vinegar-yeast, which, unless released by the expansion of the capillaries, grow, and by their chemical and life action cause what is called tubercles; just as in plum tree blight we have nodes and growths resulting from the interference with the plant life of the host by the parasitic fungus.

3. Now, if the lungs are kept fully expanded, the capillaries cannot contract or detain the vinegar-yeast to form tubercle.

Remember, nature is always trying to throw off disease, and her efforts are often called diseases themselves. Fever, for instance, is generally the result of nature's efforts to expel the intruder.

As said before, though consumption occurs in well-developed chests, it is a rare thing. There is a paralysis and interstitial death that goes along with consumption of the lungs which makes the chest contracted, flattened, and inexpansible. Of course, under this hampered condition tubercle develops more readily.

But what will you do with the bacillus of Koch?

I photographed it in 1876 with the $\frac{1}{50}$-inch objective. It came along with the yeast used in making bread. I am heartily glad to see what Dr. Koch has done, and for the attention paid to him by the world,—but is it not time to establish the fact of cures? Consumptives have been known to pick up and improve in a very short time by new treatment,—but they died ere long. Most of the 40 cures here referred to were over ten years' standing *cured.*

Music is harmonious motion, and penetrates the soul by more ways than one, and where phonation does not penetrate,—a universal language that reaches the heart and sympathetic nerves. It is a soother and soporific, and thus is a good medicine for souls distressed. Music thus takes the place of drugs and is preferable to them. For example, when the use of opiates is done away with by music, the advantage is in the avoidance of the bad effects of the narcotic on the liver and digestive organs, to say nothing of the "opium habit" which may be acquired. The music habit, if I may be allowed to use the term, has nothing harmful in its effects. Again, music is medicine to the weary adult, worn with business, work, and worriment of mind. A prominent New England clergyman, tired out with the duties of his profession, tells me that there is nothing so restful and soothing to his nerves as Haydn's trios for the piano, cello, and violin. I can testify to the same thing. May not this explain the charm of concerted music?

When the soul and body are refreshed by the music medicine, we are then ready to take hold of life's duties with renewed vigor and earnestness, and double work can be done in the same time that it took before.

I suppose music quiets the sympathetic nervous system, which does a great part of the nerve work of the body. The head nerves, which are volunteers, when worried or overworked are sad disturbers of the sympathetic nerves, which are automatic. It is possible that the agreeable occupation of the cerebral nerve-centres causes them to cease withdrawing, or rather stealing, from them the energy which is their share. However it is done, the fact remains as stated that the digestive, circulatory, secretive, nutritive, and reparatory functions are better performed when the sympathetic nerves are let alone and allowed to do their work quietly.

To refer back to the nursery, when the mother instinctively sings her nursing babe to sleep on her bosom, lactation goes on smoothly

and harmoniously, and the music soothes both mother and child; but let some intelligence of a startling character suddenly disturb the mother: the mammary gland will cease secreting, and the babe will do anything but sleep.

I think I would go so far as to put music in the materia medica after what has been said of it by many as a remedy for insomnia, neurasthenia, or nervous prostration, as it could be harmlessly used for any length of time, and would be pleasant to all. (1890, Professor Shoemaker, of Philadelphia, has put music in the materia medica.)

The celebrated watering place of Carlsbad is, and has been for centuries, a great resort of those who wish to drink its waters for their health. The German government controls the springs, and every one who comes to drink is obliged to consult a physician, who examines the case, and either sends the patient away, as not likely to be benefited, or prescribes the mode of administration which the patient must follow. Besides this, the government furnishes an excellent orchestra to play at the regulated times when the drinking goes on. For this music and the medicine, *i.e.*, the drinking-water, a tax is levied on the drinkers.

Whether the music is used as a vehicle or palliative for the unpleasant draughts (as physicians give iodide of potassium in syrup of sarsaparilla to cover the taste), or whether the music itself is intended to act as a medicine adjuvant to the waters, I know not; but we may be sure that the combination would not be enforced by the government unless it was thought advantageous by medical men to promote the appetite and zest for the unpalatable natural beverages taken for the bodily ailments of the consumers.

An affecting story is told of a child about 2 years of age, in the far West. She was stolen by Indians and kept till she was 8 years old. The parents made every effort to find the child without success. Finally, an officer of the U. S. Army, stationed at a fort, brought there the tribe in which the girl was, and also the bereaved parents, in order to examine the savage company. After a time the parents singled out their child in the savage costume, but could make no impression on her by which they could certainly recognize her. The child seemed dazed and astonished. The mother began to despair, till an older child said: "Mother, sing the lullaby that you used to sing to her when a baby." The mother did so. At once the child listened, became animated, recognized the mother, and rushed into her arms. Certainly this was a case where music acted upon an enfeebled memory as a successful stimulant, when speech had entirely failed to elicit any response.

A reference to such works as that of Dr. J. Solis Cohen, on the throat, shows what a real advance has been recently made in the knowledge and treatment of diseases of the air passages which interfere with vocal voice.

There has not been as much of an advance in our knowledge of the diseases of the ear. It is to be hoped that time will remedy this.

I refer here very briefly to the latest remedies for the most common affections of the throat, such as common colds from inflammations caused by exposure to low temperatures. These consist of inflammation, more or less extended and severe, of the mucous membranes of the respiratory tract. Colds are a simple yet complex matter, and need but little explanation as to what they are, since most people know all about them from their own experience.

When a singer is accustomed to "catch cold," a nightly sponge-bath of warm water containing a teaspoonful of ammonia to each pint, taken on going to bed, will so fit the skin (the largest gland in the whole body) to do its work that taking cold is avoided five times out of six.

In Germany, the inhalation of nascent chloride of ammonium has been used for chronic colds with success; but I have found it even more successful in acute colds. There are many good inhalers in the market, but that of the writer, furnished by Kellogg, Hitchcock & Co., of New York, is especially adapted to the inhalation of this nascent chloride, and also of menthol.

Menthol, the Japanese camphor peppermint, is derived from a plant belonging to the mint family. I use it in colds in the following ways:—

1. Best of all, use the inhaler mentioned. This will last for months, and always will be ready for use.

2. Inhale 1 drachm in dry crystals from the bottle in which it is contained, as one inhales "smelling-salts."

3. Put it into a fold of a handkerchief or paper envelope, and thence inhale.

4. Moisten a finger with water and touch it to the menthol. Then rub the adhered menthol upon the moustache or the upper lip.

If singers would use a diet consisting of two-thirds of food from the animal kingdom and one-third of food from the vegetable kingdom, or, to express it differently, a diet composed of one mouthful of food from the vegetable kingdom to two mouthfuls of food from the animal kingdom, the system would run so smoothly as not to be upset by any changes of temperature.

The daily use of ammonia sponge baths, one teaspoonful of ammonia to a pint of water, is valuable in keeping the skin in good working order.

In affections more severe than colds, such as local ulceration, proliferations, and irritation of the upper air-passages, a laryngologist should be consulted. When this is out of the question I recommend, as a local application to the affected parts, a mixture containing equal parts of the liquor of persulphate of iron and glycerin. It should be applied by a sponge or on absorbent cotton every day, or once in two days. Another excellent remedy is the ethereal tincture of iodoform (1 drachm of iodoform to 1 ounce of ether), or in benzoinol, applied as before by a sponge or on absorbent cotton. Elsberg's throat forceps is the best carrier for sponge or cotton.

I think cotton the best vehicle. A novel way, and very satisfactory application to the nares, is found in the iodoform vectores of Swift, as made by Wiley & Wallace, of Philadelphia. The iodoform is compounded with slippery elm, powdered, equal parts. I hope to see these used everywhere, for they are the best form for this use I know of.

I would add my testimony to the value of coca as a throat remedy. I have been well pleased with Mariani's preparation, and commend it as reliable, according to my best knowledge and belief. In this I only follow the eminent Elsberg, Sir M. Mackenzie, Fauvel, and others.

Affections of the air-passages of the more serious kind must be referred to the medical practitioner. So of the reflex diseases referred to.

I would remark, in passing, that I regard asthma and hay fever as a gravel of the air-passages, and now curable by diet, baths, and medicine.

Even cases of consumption come in the same category, if patients manifest will enough to govern their appetites for forbidden food, and to absolutely obey their medical adviser.

SUMMARY.

1. Without health, perfect music is hardly possible.

2. Thus, the greater our well-being, the better may we enjoy or make music.

3. Often the converse is true. Without music, poor health of soul and body; for music, as was said, is a medicine, anodyne,—soother of nerves.

4. Music is a universal language, here and in heaven, where there is no sickness.

5. There are close relations between medicine and music, and concert-singers should have frequent medical surveys by skilled throat physicians who now abound in all our large centres of population.

6. The idea of diet in music is very old and just.

7. As a general rule, no one should attempt a professional musical career who is mentally, physically, and morally unfit for it. There should be no such waste of time, strength, labor, money, and energy. Better consult a physician, as recruits are examined before enlistment.

8. Speaking in public should be in the key-note of the auditorium.

9. Teachers of vocal culture should give all facilities for the sick to use music as a medicine. To some extent they have done so already. See "Ludden's Voice Culture."

10. Parents and guardians of children of consumptive tendencies should avail themselves of musical culture as a prophylactic or preventive of disease.

11. Now that music is in the materia medica, physicians should use it as a medicine.

12. Universities should have schools of music for physical, mental, moral, and intellectual culture, we think, preferably to athletics.

13. It remains now to give voice-culture directions, which physicians may use as they prescribe antipyrin. They can do this by sending their patients to skilled teachers like those named herein.

"The Ariston," 1730 Broadway, New York.

Sick Man.—"I'm afraid I can't have you any longer, doctor; my money is all gone."

Family Physician (cheerfully).—"Oh, that doesn't matter. I've insured your life in my favor."—*New York Weekly.*

SUDDEN CHANGE OF COLOR IN THE HAIR.

By JOHN V. SHOEMAKER, A.M., M.D.

DR. ERASMUS WILSON, upon the authority of a correspondent of the London Times, cites the case of John Liberty, who attempted to assassinate the Emperor, Francis Joseph, of Austria, to the effect that when (a week after his attempted crime) he was led to execution, he was hardly recognizable, from the circumstance that his previously black hair had become almost snowy white. The change was said to have occurred within forty-eight hours. Many similar cases have been reported. Whether we suppose Liberty's hair to have previously been naturally black or artificially black, a change from either condition could have proceeded from no other cause than a chemical one. Dr. Wilson supposes, from his own microscopic examination of the white spaces in partially and irregularly blanched hair (air seeming at these points to occupy nearly the whole of the hair-shaft), that the presence of the gaseous matter there masks the color, and that saturation of hair in oil might, by expelling the gaseous matter, have the effect of restoring the color of the hair.

But if the pigment remains, as it is admitted still to remain, by the statement that its color is probably masked, how can its color be masked by air or any other gases? Gaseous matter so disposed as he describes in the vacuoles of the hair-shaft would, through the influence of light, have the effect of modifying the color, not that of masking it to the extent of obliterating it to sight. Either the pigment has lost its color or the pigment, as matter originally containing color, has disappeared; there is no other alternative. The last proposition is untenable, because the matter containing the pigment, the granules, regardless of their color, are physical existences, retained by the cuticle of the hair with a tenacity which we must believe sufficient to keep them, at least under some form of matter, from escaping.

We are therefore forced to conclude that the granules have lost their color. The presence of gaseous matter in the hair-shaft in such abnormal quantities as apparently to occupy nearly the whole contents of it offers a very important suggestion to the mind, which we will venture to set forth as the true explanation of the phenomenon under consideration.

Is it probable, we ask ourselves,—is it, indeed, credible, that this gaseous matter comes from the atmosphere,—that it is ordinary air?

If this inordinate amount of gaseous matter be atmospheric air, it must come from the inside or outside. But it cannot come from the inside, because the hair shaft is directly connected in the follicle with the hair root from which it rises; and it cannot come suddenly from the outside, because the horny cuticle of the hair cannot suddenly change, and the contents of the hair-shaft are so compact that it requires strong chemical measures (such as those used in bleaching the hair by peroxide of hydrogen) seriously to disturb them. The tendency of the contents of the hair shaft is to outflow instead of to inflow, as we see demonstrated by the shriveling of the hair during severe sickness and disease.

We are therefore driven to believe that we are not concerned with atmospheric air at all, but that the gaseous matter inside of the hair-shaft is liberated by a chemical change which has simultaneously divested the pigment granules of color and perhaps wholly converted them into a gaseous product. We believe, in a word, that the loss of pigment-color and the presence of gaseous matter are related, concomitant conditions of the same phenomenon. Upon this theory the sequence of events would be that great disturbance of the nervous system, whether primarily mental or physical, having occasioned normal and destructive secretions in the generative apparatus of the hair at the root, capillary attraction has conveyed them through the hair and thus destroyed its coloring matter, coincidently liberating gas formed as one of the products of the chemical reaction.

The views here expressed are strongly confirmed by the circumstances of a case reported in the Medical Times of July 2, 1881, since republished in the Journal of the American Medical Association, December 21, 1889, and noticed by the London Lancet. In this case, through the hypodermatic administration of pilocarpine, the hair changed entirely in the quantity and quality of coloring matter. Twelve days after the beginning of the treatment the light, blonde hair of the patient, a woman, began to darken, and continued so to do until, by the twenty-sixth day, it had become dark brown; and although at the end of seven weeks the administration of the pilocarpine ceased, the hair, at the end of four

months, had become nearly jet black. It subsequently reverted to brown. No change of structure in the hair was observable through microscopical examination. The only change detected in it was the thickening and increase of pigment. Here we have, in a surcharge of pigment, the reverse of one of the causes of blanching.

A case is also known where the fluid extract of jaborandi produced similar results. Dr. D. W. Prentiss, the original observer in these cases, gives, in his article on the subject, in the Journal of the American Medical Association, many interesting cases of change of color in the hair.

A credible medical witness has reported a case of violent neuralgia treated with morphia, bromide of potassium, quinine, etc., followed by discoloration of the hair, some of it becoming white and some red, while at the back and sides of the head the normal black tint of the hair remained. Sir James Paget tells, in one of his lectures, of the case of a lady whose hair, during attacks of nervous headache, whitened in places, and in a few days afterward regained its color.

All that we have personally been able to glean on the subject seems to warrant the conclusion that hair may change suddenly from natural or artificial causes through systemic agency, despite the fact that the hair proper has no nerves and no determinate circulation; that it does occasionally change, and that it so changes through chemical, combined with capillary, action.

CLINICAL LECTURES.

OVARIAN TUMOR—OVARIOTOMY.

By E. E. MONTGOMERY, M.D.,

Professor of Gynæcology in Medico Chirurgical College; Obstetrician to Philadelphia Hospital; ex-President American Association Obstetricians and Gynæcologists.

GENTLEMEN: I brought before you last week a patient suffering from an ovarian tumor, and upon whom we performed ovariotomy. You doubtless remember that we were very much deceived as to the conditions present. From the character of the cyst, it being evidently a single cyst, we did not expect to find adhesions, and supposed the operation would be a very simple one,—merely the incision of the abdomen, tapping the cyst, drawing it out and ligating its pedicle. On the contrary, we found extensive adhesions on the anterior parietal surfaces, so firm that it was necessary they should be cut with the scissors in order to separate the surfaces. There was considerable oozing, and in all such cases of extensive adhesions a drainage tube should be used. This tube discharged bloody serum for three days; it was then removed and wicking substituted for it. In this way we had a tent passing into the lowest part of the pelvis. The discharge through this has been quite free to-day. The patient has done very well until this morning, when her temperature went up to 103°. Upon examination of the wound I found there had been infection at two points of the suture-tract. The elevation of temperature to this height is not unfrequent where a simple abscess forms in the wall of the abdomen, and it will continue until the abscess has discharged and emptied itself. The wicking was removed this morning, and a gauze tampon passed two-thirds of the way down the tract. This is for the purpose of keeping open the external portion of the wound and preventing its union and the retention of secretion within the abdomen; for if there should be any accumulation in the lower portion of the cavity, which should in any way become infected, we would have an abscess forming which would have some difficulty in making its exit.

I now show you the tumor, having run water into the opening, filling it up. You will obtain, from its distension, some idea of the size of the tumor before its removal. Upon the anterior surface you will see the points at which the adhesions were present. These were exceedingly firm and dense, requiring the scissors to be used to separate them. The adhesions, however, were confined entirely to the parietes, with the exception of a few to the omentum, none involving the intestines or abdominal viscera. The cyst is a single one and is evidently ovarian, as we find at no place upon the cyst the evidence of a mass of ovarian tissue, as would be the case had it been a parovarian cyst of the same size.

In a patient suffering from a condition of this kind, it is very important that you should be able to readily and thoroughly arrive at a diagnosis. There are a number of conditions that may give rise to abdominal distension, and which may be confounded with ovarian tumor. Thus, distension of the abdomen from such a growth as the one which occurred in this

patient may be confounded with pregnancy. Young women have often been suspected of being pregnant, and have undergone mental torture as a result of such unjust suspicions, when the condition was due to an ovarian growth. The abdomen may be equally distended by an accumulation of fluid within its cavity,—by ascites or obesity; from phantom tumors; from growth of the kidneys, of the mesentery, and of the liver or spleen. In order to determine the proper plan of procedure in any individual case, you must be able to arrive at a definite diagnosis as to its character. Pregnancy is easily recognized by the history of the case, the progress of its development, the appearance of the patient, the symmetry of the abdomen, the fœtal heart-sounds, and the regular, rhythmical contractions of the uterus. In ascites the patient usually presents an appearance indicating the condition which has given rise to the symptom. The swelling is not usually confined to the abdomen, unless the distension be from diseased condition of the liver; in such cases we usually have the patient presenting a sallow or jaundiced appearance. In ascites, as the patient lies upon her back, the abdomen becomes flattened and broadened; the wave of fluctuation is felt from one side of the abdomen to the other. This is also the case, however, where we have a single ovarian cyst. In ascites, upon percussion, it is found that the summit of the distension gives rise to a resonance, while dullness is obtained at a lower level. In ovarian growths, on the contrary, we find dullness over the upper portion of the tumor, while resonance will be obtained upon one or the other flank, usually upon that flank opposite to which the tumor had its origin. There is a possibility of error in ascites, however, which should be kept constantly in mind. In those cases in which the abdomen is very greatly distended, percussion over the summit of the distension gives dullness, owing to the fact that the mesentery is not sufficiently long to permit the intestines, filled with gas, to float to the surface; while deeper pressure displaces the layer of fluid intervening between the intestines and the abdominal parietes, and gives resonance. In an ovarian cyst we are able to push it about and move the abdominal parietes over it. When this is readily accomplished, the tumor is recognized to be free, or comparatively free, from adhesions.

Tumors of the liver, of the spleen, or of the kidneys are more readily determined from their relations and positions. Tumors of the omentum are usually malignant in character, presenting an irregular, nodular appearance, attended by a marked cachexia. Ovarian tumors develop, as you know, from a small gland situated in the posterior fold of the broad ligament,—a gland which is $1\frac{1}{2}$ inches in length, $\frac{3}{4}$ inch in width, and $\frac{1}{2}$ inch thick. This gland projects into the peritoneal cavity, and is not entirely covered by it, its posterior surface being covered with a columnar epithelium, while that of the peritoneum is pavement. It is consequently not wholly behind the peritoneum, as are the other viscera. It is the gland in which the process of ovulation takes place; in it the ova exist, mature, and are set free with the rupture of each Graafian follicle. This process takes place each month and gives rise to menstruation. In other words, as the Graafian follicles mature, a congestion occurs in the pelvis, producing increased blood-supply of the whole viscera, with the rupture of the distended vessels in the mucous membrane and a shedding of its epithelium. Interruption of this process and a failure of Graafian follicles to rupture when an ovum has matured, is sometimes cause for the development of an ovarian tumor. As a result of inflammatory changes in the ovary, we may have a large number of Graafian follicles maturing, or, indeed, all of the Graafian follicles, in the superficial layer. Such condition is known as cystic degeneration of the ovary, and is rarely followed by the development of large cysts. Ovarian cysts arise from unruptured Graafian follicles, from inflammatory processes that have set up in the stroma of the ovary, resulting in new formation and change, and from congenital conditions, such as dermoid cysts. We can hardly credit the fact that a cyst weighing 80, 100, and, as recently reported in one case, 149 pounds, could arise from an organ the size of the ovary. Cysts are sometimes found in the pelvis, which arise as a result of changes that have taken place in the broad ligament or in the parovarian tissue. These are usually single, filled with a thin, serous fluid, and are also capable of attaining great size. In such we find the ovary spread out over the whole of the cyst and not otherwise involved.

At first I supposed that such was the condition in this patient, but subsequent investiga-

tion disclosed that the growth was in the ovary itself. Not unfrequently, as the ovary increases in size, it becomes prolapsed into Douglas's pouch, and from pressure of the surrounding viscera a slight inflammation is set up, adhesions are formed, and, in its subsequent development, fills up the pelvis, pushes out of it the uterus and bladder, and makes profound pressure upon the rectum.

A case of this kind comes to my mind which occurred at the Philadelphia Hospital. The patient was very much depressed,—mental faculties so obscured that she could give no information of the development of the condition. The anal region presented an extensive mass of hæmorrhoids; the posterior wall of the vagina was markedly protruded. The introduction of the finger disclosed an elastic mass filling up the pelvis, pushing the uterus and bladder upward. The latter organ was greatly distended by urine. Introducing the finger into the vagina, it was found apparently that this mass was very closely attached to the posterior surface of the uterus: so much so that no line of demarcation could be distinguished between the uterus and tumor. Sensation of fluctuation was very indistinct,—was more than that of elasticity. The introduction of an aspirator into the mass obtained nothing; so that it was supposed that the growth was a fibro-cyst of the posterior wall of the uterus. The death of the patient two days later disclosed, on autopsy, that the growth was an ovarian cyst, with exceedingly thick, jelly-like contents; that there were everywhere adhesions in the pelvis, and the tension of the pelvic tissue had given rise to the sensation of its being part of the uterus.

The dermoid tumors, as already stated, are congenital in their origin, and are due to the folding in of the epi- and meso- blast in the development of the fœtus. They often contain teeth, bone, hair, etc. In earlier times the presence of these tissues in the unmarried was supposed to indicate a want of chastity, and were regarded as the remains of extra-uterine fœtal life. The frequent existence of these tumors is one of the reasons why tapping an ovarian cyst is contra-indicated.

Some years ago a physician informed me that he had a patient in whom there had been a sudden prolapsus of the uterus, due to the fact of the crowding down into the pelvis of a previously unsuspected ovarian tumor. He proposed to tap this tumor through the pelvis, which I advised against. A few days later I was called to witness an operation upon the patient, whom he had aspirated through the inguinal region of the left side. The aspirator drew off no fluid. As the needle was withdrawn a mass of hair was pulled through the abdominal wound. Peritonitis at once developed, and, at the time of the operation, the patient was in a state of active peritonitis, with the whole abdominal cavity filled with liquid fat. The patient died a few days after the operation, and was an example of death from a proceeding which might have been obviated had the operation been primary instead of secondary. It is true, as I have said, that these tumors may attain to large size; but this is much less frequent than formerly, as the number of ovariotomists is so great that but few patients are permitted to go for any length of time without operation. In this I do not cast any criticisms on the profession. It was formerly taught that the patient should be permitted to go until the peritoneum had undergone certain changes as a result of the growth. But the tendency to the formation of adhesions, to injurious pressure upon the surrounding viscera, and intercurrent changes in the growth itself, oftentimes of a malignant character, have demonstrated the importance of early operation. This is still more emphasized by the very slight mortality of operations by later methods of procedure. These tumors are sometimes confounded with fibro-cystic tumors of the uterus, but usually the history of the case will be sufficient to determine the diagnosis. In obscure cases place the patient on her back, with all constricting clothing removed; have an assistant draw the tumor up, while the operator drags down upon it by means of vulsellum forceps; with the fingers of the other hand in the rectum, he is enabled to determine whether the growth is a part of the uterus.

Some years ago I saw a patient, an unmarried woman, who had not menstruated for eleven months. The abdomen was distended to the size of pregnancy at full term, but there was an entire absence of anything like fœtal contents in the tumor, as determined by palpation. The tumor, however, did not present the sensation of fluctuation; the surface was somewhat elastic. An incision was made and a trocar was plunged into the tumor, without any discharge of fluid. The mass was found to be an ovarian tumor, in which the Graafian follicle

had apparently undergone degeneration, and had attained to the size of a plum; indeed, no cyst was found larger. This conglomeration of cysts formed the tumor.

In a case operated upon in this clinic about a year ago, the patient presented a tumor which had extended considerably above the umbilicus, and, upon first examination I had no hesitancy in pronouncing it a fibroid of the uterus. Three weeks later, however, when we came to operate, the tumor had increased considerably in size, was elastic, almost fluctuating, so that I was inclined to correct the diagnosis and believe that I had to deal with a fibro-cyst. Upon removal of the tumor, it was pronounced a fibro-cyst by one of my colleagues, but incision failed to disclose a single cyst. The tumor was simply a fibroid which had become œdematous.

Ovarian tumors are readily diagnosed from phantom tumors by percussion; in the latter we have universal resonance. In cases in which there is doubt the administration of an anæsthetic leads to the disappearance of the tumor. It is a matter of considerable interest in operating upon a patient to determine whether adhesions are present, as their existence will modify somewhat your method of procedure. This particular instance will not, perhaps, impress you with our ability to determine their presence. Adhesions may be suspected when the tumor is found more or less immovable, when there has been a history of repeated attacks of peritoneal inflammation, and when the patient complains of continuous pain in certain regions of the abdomen. In this case the adhesions were quite long, permitting the tumor to be moved about in the abdomen; they were situated at the upper part of the tumor, and between it and the anterior parietes. The tumor, itself, was apparently a single cyst, fluctuation being distinct from one side of the abdomen to the other. This is usually found in what is known as parovarian cysts, and is not generally accompanied by adhesions. It is probable that the adhesions here were engendered by the patient carrying her children or other weights resting upon the upper part of the abdomen and on the tumor, in this way producing a local inflammation. The presence of adhesions, however, is not to be considered as a contra-indication to the performance of ovariotomy, as ordinarily they produce but little influence on the subsequent progress of the case. Where the adhesions are recent, they may be readily sponged off from the surface by pressing a sponge against the cyst as it is drawn out, and in this way pushing the adhesions off. Where adhesions are long and blood-vessels are large, the points of adhesions may be ligated or grasped by hæmostatic forceps before they are cut or torn off. Where we have intestinal adhesions, if these are firm and close to the viscus, it is better to cut through the cyst wall, tearing off the secreting surface, leaving the remainder attached to the intestines. Where the secreting surface cannot be removed, it may be destroyed by the application of carbolic acid. Where there is considerable oozing from extensive adhesions, it may be controlled by mopping the surface with a solution of 1 to 4 subsulphate of iron, or even the rubbing in of the solid salt. In the patient operated upon there were extensive adhesions above, resulting in a large denuded surface; this was shut off by passing catgut sutures deeply through the abdominal walls in such a way as to bring the raw surfaces in contact, and preventing the formation of adhesions between it and the viscera beneath. The peritoneum in a healthy condition is capable of absorbing from 5 to 12 pounds of fluid in an hour, and in from twelve to twenty-four hours, at this rate, would absorb a quantity of fluid equal to the entire weight of the individual. This knowledge is made use of where the abdomen is closed without a drainage-tube. The administration of opium, however, diminishes the secretions, and consequently the absorbing power of the peritoneum. For this reason it is better to administer salines early, and not to give the opium. Where the adhesions have been extensive, it is better, however, not to trust to this absorbing power, as the peritoneum must necessarily be crippled by the presence of the denuded surface. In such cases a glass drainage-tube is used, and is an instrument of great value. It should be placed with its internal end in the most dependent portion of the abdomen, having the external end projecting through the dressing and covered with a piece of rubber dam, by which the discharges are prevented from soiling the dressings and the opening of the tube is protected from contact with the external atmosphere. The contents should be emptied every half hour as long as one-half ounce of fluid can be obtained, and every hour as long as a drachm can be secured. The drainage-tube affords us an opportunity to observe the progress within

the cavity, as excessive hæmorrhage would be indicated by the contents withdrawn from the tube. The drainage-tube is also of advantage in cases in which there has been extensive adhesions, and where it is feared that unpleasant adhesions may result subsequently. Such cases should be treated by keeping the abdominal cavity through the tube well filled with a solution, so that the intestines may move about and have a layer of fluid between their adjacent coils. One of the best solutions for this purpose is the boro-glyceride, taking an ounce of a 5ō per-cent. solution of this to a pint of water, and permitting it to pass into the tube and the superfluous fluid tō flow out. It prevents decomposition. The glycerin has an affinity for the watery portions of the blood, causing the vessels to be emptied, and the layer of fluid intervening between the coils of intestines favor the re-development of the peritoneum.

ANEURISM—ITS DIFFERENTIAL DIAGNOSIS AND TREATMENT.

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THIS man is aged 41 years; occupation, teamster, for the last two years. His family history is negative, except that he has a brother suffering from rheumatism. His personal history before the onset of the present trouble is good. Two years ago he did much heavy lifting, when he first began to complain of dizziness, headache, and some præcordial distress; later, he experienced pain about the region of the heart, radiating to the right shoulder, and thence down the right arm. He also complained of pain between the scapula. About the same time he occasionally vomited; suffered from dyspepsia, flatulence, and finally he noticed a lump appear to the right of the sternum near the base of the heart. A little later he had some shortness of breath and pain, especially when lying on the left side. The pain, which is felt at the back and in front to the right of the sternum, is almost constant and moderately severe, though subject to exacerbations; is of a gnawing and boring character, and is not situated exactly over the seat of the tumor. Doubtless this pain is due to erosion of the vertebræ and ribs. The pain that is reflected to different distant parts is caused by stretching of the nerves, is neuralgic in character, and is exaggerated by excitement. It is liable to be mistaken for the pain of angina, but in the latter affection there is more anxiety, and the latter disease is more markedly paroxysmal. The history of this case points to aneurism, and first as to its causation.

A prominent predisposing cause of aneurisms is a local weakness existing in the vessel, the aorta in this case; straining efforts causing dilatation at the point of local weakness. You do not have general atheroma as a rule in these cases, because the latter occurs more often in the aged, while aneurism occurs oftener at an earlier period of life; but there may be a commencing atheroma at or near the heart. Aneurism is caused rather by a single sudden strain than by prolonged, uniform straining efforts. It occurs more often in the male than in the female,—in the ratio of 7 to 1,—because of the more laborious manual labor performed by the former. It is more frequent between 40 and 50 years of life than any other period of ten years. One half of all cases occur between 35 and 50 years; it is rare after 50 years or before 30 years. It is generally stated that syphilis is a predisposing cause, but it is more common among soldiers than sailors, while syphilis is, perhaps, more common among sailors. Tight, high collars, such as English soldiers formerly wore about the neck, causing stretching or elongation of the vessels, have been seen to be causative, and any straining efforts under these conditions readily produce the disease.

Let us review, carefully, the chief features in the clinical history of this patient's case. A symptom which calls for attention is slight contraction of the pupils; the right, however, contracts and dilates alternately, not so the left. The pupil is not much influenced by light, as you will observe when I apply the test, but it accommodates to short distances. This myosis indicates trouble with the nerves coming off from the cilio-spinal region, which nerves pass through the cervical sympathetic to the eye and control the action of the radial muscle. Any irritation of these nerves will cause dilatation of the pupil through the radial muscle, while pressure on them causes paralysis and consequent contraction of the pupil. There is, therefore, pressure on the nerves causing partial paralysis in this case. There is some throbbing of the carotid artery, increased during excitement, though not marked

at present. The nausea and vomiting here observed are caused by the pressure on the pneumogastric; so also is most probably the dyspnœa. He does not, as you will recall, suffer from dyspnœa except when lying on the left side. All the symptoms of the disease may not be present, as in his case. The dyspnœa may also be caused by pressure of the aneurism on the trachea or on either bronchus. Pressure may cause destruction of the lung-tissue. Spasm of the larynx frequently occurs, owing to slight pressure on the recurrent laryngeal nerves, with changed voice and loud, hoarse, distressing cough. When the laryngeal muscles are paralyzed on account of the pressure on the recurrent laryngeal nerve, we have dyspnœa. When pressure occurs on the right or left bronchi the respiratory murmur may be weaker over that lung; but when the bronchus is occluded the vesicular murmur is suppressed.

A characteristic physical sign is a harsh breath-sound occurring on the affected side, caused by pressure on the bronchi, heard during inspiration. If it is heard on both sides the trachea is pressed upon; I have not been able to detect this symptom in the patient before you. Percussion over this area elicits tympanitic resonance, with bronchial breathing over the tympanitic area. Cyanosis and œdema sometimes occur, from pressure on the veins, especially of the upper portion of the body, as the superior vena cava is most likely to be affected; but cyanosis and œdema will not occur to any extent if the vena azygos escapes. In those rare cases where the latter is pressed upon, it will occur over the whole upper portion of the body. In this case there is no cyanosis, but distension of the veins of the neck, increased under excitement. Physical signs: In making inspection first locate the apex beat; we find it in the normal position in this case, but we also see another movement of the integument to the right of the sternum, which can be better seen by standing to the side of the patient, or by placing a piece of paper over the site of the tumor. This pulsation is situated between the second and fourth ribs, and is better marked under excitement. Palpation: Apex beat normal. Placing my hands over the site of the impulse seen to the right of the sternum, there is a pulsatile and distensile impulse, though a large aneurism may exist without a single physical sign. On the other hand, the signs may be noticed one day and absent the next. To make certain in doubtful cases, in making palpation, place one hand on the back, the other over the tumor or over the sides of the tumor. The pulsation is more to the right in this case because of the sternum on the left. Sometimes a double impulse is detected,—a fact hard to explain. Percussion, you will observe, elicits dullness over the site of the aneurism, with a gradual shading off to normal resonance. Owing to the rounded form of the tumor, the area of dullness does not indicate the size of the aneurism. Auscultation: A bruit is heard which is a peculiar, booming shock. This is best heard when the tumor is near the chest-wall, as in this case. Sometimes it is double. It is systolic. When double it may indicate two aneurisms; this is apt to be so when one aneurism is outside the chest-wall. The second sound of the heart is increased in intensity. In an arterio-venous aneurism the only characteristic symptom is an almost continuous bruit, which, however, does not occur in this case. In cases of aneurism where there is no tumor present and the symptoms do not all occur, the diagnosis must be made from certain physical signs, namely, the pulsatile and distensile movements on palpation, the distinct shock and accentuated second sound on auscultation. When satisfied as to the diagnosis of aneurism, determine next the location. In this case we find the pulse at the wrist both the same, *i.e.*, small and diminished in force. When this occurs, it is good evidence that the aneurism is situated in the ascending aorta; should both be affected, but the right more than the left, it would be situated both in the aorta and innominate. If the right only be affected, the aneurism is in the innominate. Having thus determined the probable location by the condition of the pulse, we find the position of the tumor to be, in the case of aneurism of the ascending aorta, to the right of the sternum, in the second and third interspaces. If behind the manubrium sterni, the transverse aorta would be affected; if below the left clavicle, the terminal portion of the transverse aorta; if in the episternal notch, the innominate is probably affected; between the clavicular and sternal ends of the sterno-mastoid muscle, the carotid is implicated. There are exceptions to these general rules. In making a differential diagnosis from a solid tumor you should exercise care. You would have, in the case of a solid tumor, the pressure symptoms and nearly

all of the physical signs, but you do not get, on palpation, the peculiar distensile impulse.

The diagnosis is difficult when the tumor is not near the chest-wall. Again, in solid tumors there is not the booming shock heard on auscultation, and the second sound of the heart is not accentuated, while the impulse is as strong over the tumor as over the heart. In an aneurism, on the other hand, the impulse is stronger over the aneurism. At times, in cases of aneurism, the symptoms and signs are wanting for days, then appear again. In the case of a solid tumor they are more steadily progressive; a sarcoma appearing or which can be felt in the episternal notch will give the impulse and bruit similar to aneurism of the innominate; but by waiting, evidences may appear elsewhere which would confirm the diagnosis. Reserve your opinion in these cases for awhile. Aneurism of the innominate must occasionally be distinguished from abscess of gland in the region of the episternal notch. You may have the same signs in these two conditions, but only for a short period of time. When aneurism occurs near the aortic valves, it may cause their separation and give rise to the symptoms and signs of regurgitation, in which case the diagnosis could not be made absolutely during life. Chronic endarteritis may have all the physical signs and symptoms of aneurism. One other condition may simulate rather closely aneurism, namely, pulsating empyema. But this occurs only on the left side, and the area of dullness is relatively greater than the area of feeble impulse; while in aneurism the area of dullness is smaller and the impulse relatively more marked than in empyema. Aneurism of ascending aorta usually points to the right of the sternum, while empyema points to the left of sternum, with displacement of the heart as a rule, and embarrassed circulation. The course of an aortic aneurism is rapid; 50 per cent. terminate in a year, 75 per cent. in two years; a few cases only end in recovery. The object to be attained in the treatment is to cause coagulation or the deposit of fibrin. Compression can be practiced if the aneurism be located along the abdominal aorta. Pressure by means of blocks of cork, hollowed so as to fit the tumor when in the extremities, these kept in position by a figure-of-eight bandage, has been successful. This method is original with Professor Laplace. Potassium iodide is the drug to be given; it lessens blood-tension and causes thickening of the walls of the vessels, and is to be exhibited in doses of gr. xx, three times daily, with rest, restricted diet, and a minimum amount of liquid food. This lessens the proportionate quantity of liquid in the blood and tends to cause deposit of fibrin. The treatment of Tuffnell has given encouraging results. Absolute rest in the recumbent position for eight or ten weeks is enjoined, with regulated diet, consisting of 2 ounces of white bread and butter, 2 ounces of cocoa or milk for breakfast; 3 ounces of boiled meat, 3 ounces bread and butter, 4 ounces of water or claret for dinner; 2 ounces of bread and butter and 2 ounces of milk for evening meal. Something like the following pill is employed by Tuffnell: Lactucarii, gr. iij; hyoscyami, gr. j. To be administered as required for the nervous restlessness of the patient.

One of the leading indications for the use of drugs is to allay pain, and for this symptom opium is to be exhibited in doses large enough to afford relief. The method of Tuffnell, therefore, embraces the following: absolute rest, greatly restricted diet, and the use of medicines. A few observers advise the use of digitalis,—a remedy that I have not tested in this disease. There is nothing, however, in the physiological action of this drug to suggest its employment in aneurism.

ABSTRACTS.

THE SURGICAL TREATMENT OF EXOPHTHALMIC GOITRE.—At a meeting of the Medical Society of Hamburg, Dr. F. Lemke, of that city, after speaking of our imperfect knowledge of the pathology of the disease and the unsatisfactory results of treatment, related the history of 2 cases in which he had resorted to surgical procedure, and brought his patients before the society for examination. One of these was cured, and the other so considerably improved that, in place of being a very ill man, unable to do any work, he is now able to follow his pursuits with satisfaction. The speaker had purposely avoided premature publication, and had allowed seven and six months respectively to elapse in order that the permanence of the improvement should be demonstrated.

The first case was that of a 17-year-old lad who had suffered for two years with undoubted Basedow's disease. Finally, a sudden swelling

of the thyroid seriously obstructed respiration, the face being cyanosed, pulse rapid and irregular; he could get but little sleep or take sufficient food, and his temperature mounted. A few weeks later Dr. Lemke was called to see the patient, and, determining to perform tracheotomy, had the boy removed to the clinic. The journey was well borne; the patient was anæsthetized and an inferior tracheotomy attempted, but was impossible to execute, as the trachea was completely overlaid by the gland. The incision was therefore extended upward, but, as the patient was becoming asphyxiated, nothing remained to do but divide the gland and perform cricotomy. After the operation the patient slept for twenty-four hours, only rousing to have the tube cleaned and to take nourishment. Progress was so favorable that by the eighth day the speaker could think of extirpating the left and larger half of the thyroid. This operation was performed without accident, the gland being shelled out by the fingers and handle of the knife. The wound healed kindly, and eight days after the operation respiration was free and normal without the aid of the canula. Soon after the operation the well-marked ophthalmos almost entirely disappeared. Seven months later he looked the picture of health. The right half of the thyroid had returned to the normal size, the pulse had become regular and of normal frequency, the eyes were no longer prominent, voice was again clear, and the laryngeal mirror showed that both halves of the larynx were fully able to perform their functions. The bodily weight had notably increased, and the patient considered himself restored to health.

The happy result in this case determined Dr. Lemke to follow the same method in a second, which he had treated in vain for more than a year. The second patient was a man 47 years of age. He was emaciated; his eyes projected remarkably; the thyroid was greatly enlarged, especially on the right side, and communicated to the hand laid upon it a sensation like that produced by an aneurism. The heart-beats were irregular and so rapid that they could not be counted.

Anæsthetization was difficult on account of the bad condition of the heart; but it was remarkable that the pulse became more quiet when under the influence of chloroform. The right half of the gland was rapidly removed, and the hæmorrhage spontaneously ceased. The wound healed rapidly, and by the second day exophthalmos was much less apparent. At the end of six months the man was in good health, his eyes normal in appearance, the left half of the thyroid had shrunk, and he had been able to work for four months, living at the same time upon a fourth floor, to or from which he was obliged to go several times a day.

As is well known, one-half of the thyroid gland may be removed without injurious consequences, and by the present methods of surgery the attempt is not peculiarly dangerous, though the operation, certainly, should be intrusted to none but a surgeon of experience and resource. The speaker concluded that the treatment of exophthalmic goitre belongs to surgery and not to medicine.—*Deutsche Med. Wochenschrift*, January 8, 1891.

THE TREATMENT OF TUBERCULOUS ABDOMINAL DROPSY.—Herr König, of Göttingen, in an address upon this subject before the Tenth International Congress, said: Since he, in 1884, drew general attention to the favorable results of laparotomy in tuberculosis of the peritoneum, 131 well-observed cases of the kind had been reported, 14 of which were from his own practice. Of this number, in 107 the operation had been followed by decided improvement. In 23 the amendment was not of long continuance, so that but 84 (65 per cent.) remained "cured." But if, as in the statistics of malignant tumors, the list of those remaining cured is revised yearly, at the end of the first year the number is reduced by about 38, and by about 17 more at the end of the second. Thirty cases remained in good health for more than two years, 14 for more than three years, and among these are cases which remained cured fifteen, thirteen, ten, nine, eight, seven, and six years. The results being so gratifying, it is proportionately reprehensible to avoid adopting a method simply because it has no analogy with other localizations of tuberculosis. Two questions present themselves: 1. What cases are cured? 2. Have special methods been used in the cure? For reasons readily understood, far the larger proportion of such cases occur in females, and the fact of cure has been not only clinically, but also in 2 cases certified by the pathological anatomy. The mode of attack, the unusual character of the method, is not what determines the result. The cure depends upon the oper-

ing of the peritoneal cavity and the manipulations therein equally, whether with or without the use of antibacterial agents. Among the cases cured are found some with adhesions and tuberculous masses as large as cherry-stones; some with free or encysted ascites; others, again, with large abscesses and serious organic alterations. Moreover, it is not the peculiarity of the case which decides its different degree of curability ("internal and surgical tuberculosis"). The personal experience of the speaker has furnished him types of all possible special forms of tuberculosis. Is the special etiology of a certain case determinate? Two theories are suggested: peritoneal tuberculosis may be a portion of a general miliary tuberculosis or it may be the product of infection from a local depot. A cure is possible in either variety, but especially in the second, and here a primary intestinal tuberculosis plays a chief part. The prognosis of this is far from being so dark as is generally supposed, and after the cure of the primary depot nothing forbids a belief in the curability by operation of the secondary extension.—*Deutsche Med. Zeitung*, January 8, 1891.

Cure of Recurrent Multiple Sarcomata of the Skin in Consequence of an Erysipelas Migrans.—The case was reported by Dr. Langenbuch at a meeting of the Free Association of Surgeons of Berlin, October 13, 1890. The patient was a laborer, 27 years of age. In August, 1888, a tumor the size of a child's head had been removed from the region of his left hip. The tumor was situated in the subcutaneous tissue, and microscopical examination showed it to be a round-celled sarcoma, with a slight admixture of fibrils. Early in March, 1889, the disease returned in the scar, and about the same time a new and larger growth appeared upon the neck. Soon afterward a still larger tumor developed upon the right side of the buttock, and, in addition, about fifty small tubers of various sizes, most of which were situated upon the front of the chest and abdomen. On account of these the patient entered the Lazarus Hospital. It was obviously out of the question to attempt removal of all the growths. The three largest, however, were excised, and, in the hope of causing retrogression of the smaller, the patient was put upon heroic doses of iodide of sodium and arsenic. The operation-wounds healed kindly, and under the influence of the iodide and arsenic the multiple growths seemed to be diminishing in size, when suddenly the man was seized with an erysipelas migrans, and within about eight days all the tumors had vanished. Their rapid decrease appeared on the third day and by the fifth was completed. The patient recovered favorably from the erysipelas. In the autumn a tumor about the size of a walnut developed in the wound in the neck and was recognized under the microscope as a recurrence of the original disease, and therefore extirpated. With this exception, at the time of the report there was no sign of return. The case affords another evidence of the rapid cure of large, numerous, and undoubted sarcomata by an attack of erysipelas. It is possible that the energetic iodide and arsenic treatment contributed to the result, as the tumors certainly did decrease during its administration, but the rapidity of the resorption was, beyond all doubt, due to the erysipelatous process.

Such a history lends support to the proposition to treat sarcoma unamenable to the knife, and occurring in persons whose general condition still remains good by means of injection with a culture of erysipelas microbes.—*Deutsche Med. Wochenschrift*, December 25, 1891.

Galactagogue Action of Galega.—At a meeting of the Society of Practical Medicine, January 15, 1891, M. Carron de la Carrière read a paper upon this subject. He summed up his observations by saying that galega exerts a favorable influence in cases in which milk is insufficiently secreted. Given in the form of an aqueous extract, in the daily dose of 2 to 4 grammes (½ to 1 drachm), galega excites within a few days a notable augmentation of the milk. This increase relates not only to the water, but to the globules also, as is shown by direct analysis and the gain in weight of the child.—*Le Progrès Médical*, January 24, 1891.

The Influence of Sex upon the Lateralization of Diseases of the Ear.—From a study of 3000 cases, Löwenberg arrives at the following conclusions: When a single ear is affected it is generally the right ear in women and the left in men. When both sides are attacked, the condition of the left ear is generally the worst in men, while this is very seldom the case in women.—*Revue de Laryngologie, etc.*, February 1, 1891.

THE EXPERIMENTAL PRODUCTION OF EXOPHTHALMUS.—M. H. Stilling, of Lausanne, has communicated to the Academy of Sciences a note relative to some experiments designed to throw light upon the pathogenesis of exophthalmus. He says: "I restricted myself to ligating both external jugular veins, and divided the trunk of the sympathetic only upon one side. The operation was followed by a more or less considerable œdema of the face. The nasal mucous membrane became swollen, so that the animal operated upon had a good deal of difficulty in breathing. Lachrymation was nearly always observed on both sides, together with a very considerable double exophthalmus. The third eyelid projected markedly, and the eyeball was turned a little upward. No abnormal appearance was presented by the pupil of the side on which the sympathetic was intact. The œdema and difficulty of respiration soon disappeared. By the next day after the operation they had vanished. The exophthalmus generally persisted for a week; in one case it only lasted six days. It temporarily re-appeared when the rabbit was frightened, as when taken by the ears. But after ten days nothing abnormal was perceived in the animals operated upon, except the persistent effects of section of the sympathetic.

"The fact that the exophthalmus was more decided upon the side on which the sympathetic was divided seems worthy of remark. It would be easily explained by paralysis of the orbital muscle of Muller (caused by section of the sympathetic) if simple ligation of both external jugular veins produced a somewhat less pronounced exophthalmus. The exophthalmus which follows ligation of the jugular veins is, however, much less marked, and disappears much more rapidly than that produced by the same operation complicated with unilateral section of the great sympathetic. Moreover, it appears to me, as has been remarked by M. Boddaert, that simple ligation of the veins does not always occasion projection of the eye. R. Lower, who was the first to study the consequences of tying the jugulars, would certainly have mentioned this phenomenon. Has he not excellently described the œdema, lachrymation, and dyspnœa (a symptom which appears to have escaped the notice of M. Boddaert)? It would seem that establishment of the collateral circulation is less readily accomplished in the dog (upon which animal the experiments of Lower were made) than in the rabbit, for the animal operated upon by the illustrious physiologist perished at the end of two days: 'intra duos dies canis quasi angina suffocatus interiit' (R. Lower, Tractatus de corde, chap. ii).

"It is, in fact, the dilatation and engorgement of the retrobulbar veins which projects the eyeball. The fatty tissue and glands of the orbit do not appear to be altered. In one case, after the exophthalmus had lasted ten days, I observed that in the ocular muscles certain fibres had become opaque, lost their striation, and exhibited numerous fine granulations. Perhaps the venous stasis, though not of long continuance, had, by producing degeneration of the muscles, rendered the exophthalmus permanent.

"I would add that the sympathetic should be divided low in the neck. Extirpation of the superior cervical ganglion fails to increase the exophthalmus produced by the ligature of the jugular veins. The fact that section of the sympathetic upon one side augments upon both sides the effect of ligature of the veins is not easily explained, but seems to me to merit the attention of pathologists. The relation which may be perceived to the symptom so characteristic of Basedow's disease is of interest."—*La Tribune Médicale*, February 5, 1891.

EXPLORATORY LAPAROTOMY IN A CASE OF OBSTINATE JAUNDICE.—At a meeting of the Academy of Medicine, February 3, 1891, M. Routier related the following history: A woman connected with the Hôpital Laennec was suddenly attacked by jaundice October 2, 1890. Two days later she suffered severely from a fit of hepatic colic, which lasted about twenty-four hours, and was placed under the care of Prof. Straus. But in spite of energetic treatment the jaundice deepened to a bottle-green hue, the urine became black, and the stools lost their color entirely. Examination showed that the liver extended below the false ribs and that the region of the gall-bladder was painful. During the month of October the patient daily grew worse. Every second day she had a severe attack of colic, with vomiting and chills. After the 22d vomiting became incessant, emaciation was marked, the pulse was thready, and fainting fits occurred every day. In consequence of the continual failure, and as it was believed that a material

obstacle, in all probability a calculus, opposed the outflow of bile, M. Routier was, on the 30th, asked to examine the woman, but was not able to discover any distension of the gall-bladder. Nevertheless, and precisely on account of the doubtful result of a scrupulous examination, and persuaded, on the other hand, that an exploratory operation could not aggravate the condition, already so precarious, and might furnish indications which were lacking, M. Routier determined to perform laparotomy. This course was advised by Professor Straus, and demanded, moreover, by the patient. On the 30th, sub-umbilical median laparotomy was practiced. The gall-bladder did not extend beyond the border of the liver; its walls were thickened, but supple; it was not distended, for on pinching it between the fingers its opposite walls could be brought together without exerting much force. The neck of the gall-bladder, the region of the hepatic, cystic, and choledoch ducts were palpated, pinched, and kneaded in order to discover the existence of any obstruction. The duodenum and head of the pancreas were explored in the same manner. All these efforts were negative, but no consideration seemed to indicate a necessity of giving issue to the bile outside its natural passages. The operation was, therefore, abandoned at this stage, and the abdominal walls brought together by sutures. The manipulations had been limited to a sort of direct massage of all the biliary passages. Nevertheless, the vomiting ceased from the day of operation. Two days later the icterus began to fade, six days afterward the stools acquired color, and the pigment disappeared from the urine. Finally the patient was cured, in spite of a broncho-pneumonia, which began the day following the operation. M. Routier congratulated himself upon the result of his intervention, and attributed the result to the massage of the biliary ducts and the inferior surface of the liver, which must have displaced some mucous plug and permitted the bile to resume its interrupted course. It might be concluded that exploratory laparotomy is advisable in doubtful and grave cases of rebellious icterus. —*La Tribune Médicale*, February 5, 1891.

THE INFLUENCE OF INTESTINAL ANTISEPSIS UPON THE TOLERANCE OF CERTAIN DRUGS.—M. Féré remarked, at a session of the Biological Society, January 31, 1891, that he had already called attention to the favorable effect of intestinal antisepsis upon the subjects of bromism. This practice causes disappearance of all the symptoms, and, especially, of the cutaneous manifestations. Antisepsis has been uninterruptedly continued, and, although the patients have been taking daily 4 grammes (1 drachm) of naphthol and 2 grammes (½ drachm) of salicylate of bismuth for more than two months, they had experienced no ill consequences. The tolerance, then, is very great. It seems that we may consider as definitive the advantages which these substances confer relative to the administration of the bromide of potassium. In several cases M. Féré has been able to administer as much as 15, 16, and even 17 grammes (4 to 4½ drachms) of the bromide daily, not only without detriment to the general health, but with great benefit as regards the convulsions. M. Féré reports that intestinal antisepsis is equally advantageous to those under treatment by borax. The latter drug, which sometimes gives rise to an eruption, can be given in this manner without inconvenience.—*La Tribune Médicale*, February 5, 1891.

TREATMENT OF MALIGNANT TUMORS UNAMENABLE TO OPERATION.—At a meeting of the Royal Society of Physicians of Vienna, January 30, 1891, Hr. von Mosetig spoke as follows: "I have been interested in this subject for a number of years. Its experimental investigation is beset with difficulties, and, to the present time, only in isolated instances has it been found possible to produce, artificially, neoplasms in animals. I have tried all the remedies which have been proposed by others (Thiersch's nitrate-of-silver treatment, condurango, papayotin, etc.), but without any result. I consequently determined to pursue my own course. A fundamental fact which occupied my mind was that the neoplastic elements possess less resistant power than the surrounding healthy tissues. In 1885 I employed lactic acid in cases of epithelioma, but without success. Some years later it was asserted that the inoculation of erysipelas in the neighborhood of morbid growths might produce retrocession. Though the experiments in this direction often led to negative results, and in other cases the inoculation with erysipelas was followed by severe, and even fatal, consequences, yet this method left behind it a powerful impression.

Under the altered conditions of tissue change and circulation excited by the erysipelas the comparatively unresistant neoplastic elements were more deeply influenced than were the healthy tissues around the tumor. The same kind of influence might be produced by means which act upon the vasomotor nerves. I discovered such an agent that could be injected in the fluid form into the neighborhood of a tumor, and was followed by certain effects upon the tumor and also upon cold abscesses. After injection a local reaction was manifested similar to that observed from Koch's fluid.

"As the preliminary proliferation of cells was more closely examined, I conceived new ideas and impulses. Was it not possible to produce an arrest of this proliferation through a special influence upon the cell-nuclei? The aniline dyes seemed to commend themselves particularly for this purpose on account of their affinity for the nuclei. I therefore made some experiments with anilinum trichloratum. A man, 50 years of age, was suffering from a round celled sarcoma of the upper part of the thigh. Into the base of this tumor I injected a gramme of a 1 per-cent. solution of anilinum trichloratum. The injection was well borne, although a bluish discoloration appeared upon the face and hands. The sarcoma ulcerated in several places and gave exit to a colored fluid. The tumor gradually diminished, and after three weeks of such treatment the œdema of the limb disappeared. After injection of 4 grammes of this solution severe symptoms occurred: vomiting, loss of consciousness, discoloration of the whole body, and Cheyne-Stokes respiration. It was necessary to maintain artificial respiration for three hours. The patient then gradually recovered. After this injection the ulcerated spots cicatrized and the morbid growth seemed transformed into cicatricial tissue. The patient returned home, and died a year later of pneumonia, no recurrence of the growth having taken place.

"During the preceding year the methyl-violet of Merck has appeared, and pyoctanin has been recommended by Stilling as a safe and useful remedy. This led me to further researches. A patient, a woman 66 years of age, came under my care on account of a tumor which occupied the middle half of the lower jaw-bone. It projected both externally as well as internally, encroaching upon the cavity of the mouth so that the patient was with difficulty nourished, and nearly perished with hunger. I resolved to use methyl violet in this case, and injected a solution at first of 1:500, afterward of 1:300, each time employing 6 grammes. Under this treatment the tumor did not break open, but gradually diminished, so that its point of origin, which previously had been uncertain by reason of the size of the mass, could be definitely ascertained. It had developed from the centre of the bone, extending thence both externally and internally. The patient is now able to partake of ordinary hospital diet without trouble. The treatment shall be further prosecuted in this case. Whether that portion of the growth situated within the bone will also vanish remains to be seen.

"A second case was that of a man, aged 58 years, who had upon the side of the neck a tumor which reached down as far as the upper border of the pectoralis major muscle. The average dimensions of the growth before treatment were: 13 centimetres (5 inches) at the base and 8 centimetres (3 inches) in height. After treatment with methyl-violet the mass now seems reduced, measuring 10 centimetres (4 inches) at the base and 8 centimetres in height. The neoplasm is considered to be a cysto-sarcoma. During the treatment it has been ruptured in some places.

"I am able to report favorably of this method in 2 cases of unremovable adeno-sarcoma. I have likewise under treatment a patient afflicted with papilloma of the bladder, and much reduced through repeated hæmorrhages, so that the idea of removal by section of the bladder cannot be entertained. Injections of 20 grammes of 1:1000 solution have been made into the bladder; the condition of the patient has improved and the hæmaturia has ceased. Finally, I will mention the case of a 60 year-old man in whom a colossal sarcoma has developed from the pelvis and embarrassed evacuation of the bowels. In course of time symptoms of occlusion were manifested. The extreme distension of the colon demanded colotomy, which I accordingly performed. The transverse colon then collapsed, and in a few days the bowels moved spontaneously. At this time the tumor extended to the umbilicus, the abdominal wall was in two places reddened and thinned, and rupture was imminent. Fistulæ have formed in these situations. Determining to make use of the pyoctanin treat-

ment in this case the patient has had, to the present time, sixteen 6-gramme injections of a 1:500 solution. The tumor has decreased by one-half, and the man feels comparatively well; has regular stools, a good appetite, sleeps well, and walks for three or four hours every day.

"I feel very well satisfied with these results, for in each instance the tumor was of such a character as to constitute a *noli me tangere* to the operator. As regards the method of making the injections, antiseptic precautions were always observed. The solutions were thrown into the neoplasm and its neighborhood. No pain or fever was occasioned. The only local symptom was hyperæmia. Perhaps the future will make us acquainted with other dye-stuffs capable of yielding still better results."—*Deutsch. Med. Zeitung*, February 5, 1891.

THERAPEUTIC NOTES.

THE USE OF ACETANILID IN ULCERATED CHANCRES AND CHANCROIDS.

K. P. Wasilewitsch recommends the local application of acetanilid (antifebrin), and reports a number of cases thus treated. The writer employs the substance as a simple dusting-powder, and finds that the ulcers heal in a short time. He considers acetanilid preferable to iodoform in having no smell and no toxic effect, even when freely used. It has also the advantage of being cheaper than iodoform, which renders it more suitable in hospital and dispensary practice.—*Deutsche Med. Wochenschrift*, January 29, 1891.

TREATMENT OF URTICARIA.

M. Quinquaud, physician to the Hôpital Saint-Louis, says that intermittent urticaria is sometimes, though rarely, ameliorated by sulphate of quinine in doses of 50 centigrammes, but that arsenic, in the form of Fowler's solution, is generally more efficacious. As regards chronic urticaria, baths of all kinds should be absolutely forbidden, for they but serve to prolong the trouble indefinitely; yet they are often erroneously advised. On the other hand, envelopment in cotton-wool constitutes, whenever practicable, an excellent treatment. Internally, alkalines, arseniâte of sodium, and naphthol should be prescribed. The almost intolerable pruritus may be allayed by the frequent use of the following lotions:—

℞ Cherry-laurel water, . 50 grammes.
Chloral, . . . 5 grammes.
Water, . . . 200 grammes.

Or,

℞ Ether, . . . 30 grammes.
Lukewarm water, . 60 grammes.

M. Quinquaud advises, also, camphorated alcohol (1:10) with chloroform-water (1:1000), or the following powder:—

℞ Powdered starch, . 50 grammes.
Oxide of zinc, . . 10 grammes.

Or,

Salicylic acid, . . 5 grammes.

—*La Tribune Médicale*, January 1, 1891.

ANTISEPTOL.

Antiseptol, or iodo-sulphate of cinchonine, is a brown powder, a definite combination of iodine and sulphate of cinchonine. It can be obtained in crystalline form; is insoluble in water, but soluble in alcohol and ether, and has no odor. It contains half its weight of iodine, and can be used in place of iodoform, either unmixed or combined with lycopodium or talc:—

Powder.

℞ Antiseptol, . . . 5 grammes.
Powdered lycopodium or talc, . . 5 to 10 grammes.

Pomade.

Antiseptol, . . . 1 to 5 grammes.
Vaseline or lanolin, . 10 grammes.

—*Le Progrès Médicale*, January 17, 1891.

METHODS OF TREATMENT OF TINEA TONSURANS IN THE HOPITAL SAINT-LOUIS.

The following summary is from the inaugural thesis of Dr. Carrère:—

I. Method of Bazin.

1. Epilation of the patches.
2. Lotions of corrosive sublimate (4 to 1000).
3. Application of a germicidal pomade containing acetate of copper, iodide of sulphur, or turpeth mineral.

II. Method of Vidal.

This method is the basis of most of the plans of treatment in use in the house since MM. Vidal and Marfan, in 1888, demonstrated that trichophyton is essentially an aërobic parasite, and that the principle of occlusion is one of the best means of securing its destruction.

1. Frictions with essence of turpentine and painting with tincture of iodine the regions attacked.

2. Application to the head of a layer of iodized vaseline (4 to 100) covered by a rubber cap.

III. Method of Ernest Besnier.

1. The hair must be kept as closely cut as possible during the treatment. Epilation in a zone of 6 to 8 millimetres (¼ to ⅓ inch) around the patches of tinea. Remove by means of the curette all the broken hairs and grayish products accumulated upon the patches.

2. Wash daily with tar, salicylic acid, or sulphur-soap.

3. Keep all the patches covered with emplastrum de Vigo.

IV. Method of Hallopeau.

1. Wash the hairy scalp every morning with black soap. Then, having wiped it dry, rub with the following solution:—

Camphorated alcohol,	125 grms.
Essence of turpentine,	25 "
Solution of ammonia,	5 "

2. Inunction half an hour later with iodized vaseline (1 to 100).

3. Keep the head covered all day with a rubber cap. In the evening repeat the inunction of iodized vaseline.

V. Method of Unna (of Hamburg).

1. Application to the entire scalp of the following pomade:—

Salicylic acid,	2 grms.
Chrysarobin,	5 "
Ichthyol,	5 "
Simple ointment,	100 "

2. Keep the head covered with a cap of impervious tissue, which may be partially removed every fourth hour, in order to apply a fresh layer of pomade.

3. At the end of four days discontinue the chrysarobin pomade, and for three days use inunctions with a 5-per-cent. ichthyol pomade.

4. With the second week begin a new treatment of seven days, and so continue until the case is cured, which will take about a month.

VI. Method of Quinquaud.

1. Cut the hair very short with scissors; wash the head every morning with soap and warm water, and then rub with the following lotion:—

Biniodide of mercury,	0.15 grm.
Bichloride of mercury,	1.00 "

Triturate in a mortar and dissolve with—

Alcohol of 90°,	40 grms.
Distilled water,	250 "

2. After scraping briskly with a dull curette and the use of the lotion, apply the following plaster:—

Biniodide of mercury,	0.15 grm.
Bichloride of mercury,	1.00 "
Simple plaster,	250 grms.

3. At the end of forty-eight hours remove the plaster, wash the head with soap and water, rub with the lotion described, renew the plaster, and recommence the preceding routine until the cure is complete.

M. Quinquaud has also successfully employed, instead of the plaster, the following pomade:—

Vaseline,	100 grms.
Chrysophanic acid,	2 "
Salicylic acid,	2 "
Boric acid,	2 "

—*La Tribune Médicale*, February 5, 1891.

INTRA-UTERINE ANTISEPSIS.

The following formulæ for intra-uterine applications are from the thesis of M. Couturier:—

Creasote Mixtures.

1. Pure beechwood creasote, 20 grms.
   Glycerin, 60 "
   —DOLERIS.

2. Pure beechwood creasote, 15 grms.
   Glycerin, 50 "
   —BUDIN.

3. Pure beechwood creasote, 10 grms.
   Glycerin, 100 "

Iodoform Mixtures.

1. Emulsion, 1 to 3.
   Iodoform, 15 grms.
   Glycerin, 30 "
   —ROUX AND SCHNELL.

2. Iodoform, 50 grms.
   Glycerin, 40 "
   Water, 10 "
   Gum tragacanth, 0.30 "
   —ROUX AND SCHNELL.

3. Iodoform, ... 2 grms.
Gum tragacanth, . . . 6 "
Water, ... 10 "
—ROUX AND SCHNELL.

Crayons.

1. Powdered iodoform, . . 10 grms.
Gum tragacanth, . . . 50 "
Glycerin,
Distilled water, . . . q. s.
—PERAIRE.

2. Powderd iodoform, . . 20 grms.
Gum arabic,
Pure glycerin,
Pure starch, . . . āā 2 "

For three crayons, 5 or 6 centimetres long (2 to 2⅓ inches).—SPÆTH, of Vienna.

Prof. Da Costa recommends the use of hydrobromate of hyoscine in doses of ½ grain for the tremor of paralysis agitans.—*Med. Summary*, February, 1891.

Cases of simple conjunctivitis are frequently benefited very much by the following prescription, which is used in the Jefferson clinic:—

℞ Acid. borici, . . . gr. xx.
Aquæ camphoræ,
Aquæ destillat., . . āā f℥ij.

M. Sig.: Bathe the eyes freely, dropping 2 or 3 drops in each eye four times daily.—*Med. Summary*, February, 1891.

CALMATIVE FOR HYSTERIA.

℞ Chloral hydrat.,
Sodii bromid., . . āā ℥j.
Ext. hyoscyami, . . . gr. ⅗.
Ext. cannabis Indicæ, . . gr. ⅗.
Mucil. acaciæ, . . . ℥ij.

M. Sig.: Dose, 2 to 4 drachms, every half to one hour, in a cup of orange-flower-water. Specially useful for hysterical persons who complain of night terrors and insomnia.—GRASSETT, *La Méd. Moderne; Times and Register*, February 21, 1891.

EUCALYPTUS IN CATARRH OF THE RESPIRATORY TRACT AND OBSTINATE COUGH IN CHILDREN.

In acute cases, my usual custom is to administer it in connection with ammonium salts; in subacute cases a little paregoric may be advantageously added. In the obstinate irritative coughs following inflammatory affections which have apparently subsided, the fluid extract of eucalyptus is best given without other drug, in syrups of tolu and acacia, or in an emulsion of oil. The dose is about 5 drops for a child of two years. The following are specimen formulæ:—

℞ Ammonium carbonate, . gr. viii–xvj.
Ammonium chloride, . gr.xxii–xlviij.
Fluid ext. of eucalyptus, . f℥iss.
Syrup of acacia,
Syrup of tolu, . . āā f℥ss.
Water, . . . ad f℥ij.

M. Sig.: For a child 2 years of age with acute bronchial or laryngo-tracheal catarrh, 1 fluidrachm, in milk or water, every two, three, or four hours.

℞ Aromatic spt. of ammon.,
Camph. tinct. of opium, āā f℥ij.
Fluid ext. of eucalyptus, . f℥iss.
Syrup of acacia,
Syrup of wild cherry, āā f℥ss.
Water, . . . ad f℥ij.

M. Sig.: For a child with subacute bronchial catarrh, 1 fluidrachm in water every two, three or four hours.—S. SOLIS-COHEN, in *Med. News*.

For a serpiginous ulcer of the cornea, Keyser prescribes the following ointment to be placed in the eye three times daily, the lid to be closed after each application:—

℞ Iodoformi, ... gr. v.
Adipis benz., . . . ℥j.
Ft. ung.

Commenting on the disease, he says: "This is a very painful disease, on account of exposure of the fine corneal nerves. The cause is really not exactly known, although some of the well-known ophthalmologists and investigators claim that it arises by the development of a bacillus in the superficial layer of the cornea. . . . The lesion looks much like an abrasion. Sometimes the deeper layers are invaded, when, generally, the formation of an abscess is likely to occur. When this is the case, a mydriatic or myotic should be used, according as the ulcer is near the centre or margin of the cornea, to guard against the possibility of the iris falling into the abscess-cavity, in case it ruptures. Cocaine should not be used in this disease, because it contracts the blood-vessels, thus lessening the supply of nutrition to the cornea; which, in consequence, is liable to undergo necrosis. Intense pain also follows the disappearance of its effects, caused by a too rapid dilatation of the blood-vessels. To relieve the pain, applications of warm water are useful, and if the deeper tissues are involved, a compress bandage should be applied. The eye should be washed with antiseptic solutions of corrosive sublimate or boric acid.—*Times and Register*, February 14, 1891.

INJECTION FOR SEAT-WORMS.

The Annals of Gynæcology and Pediatry quotes the following prescription to remove seat-worms:—

℞	Tincture of rhubarb, . .	30 drops.
	Carbonate of magnesia, .	3 grains.
	Tincture of ginger, . .	1 drop.
	Water, ...	4 oz.

The mixture should be warmed and used as an injection, repeating three or four times in twenty four hours.—*Weekly Med. Rev.*, February 7, 1891.

ACUTE GONORRHŒA.

Schwimmer especially recommends the following injection in acute gonorrhœa:—

℞	Salicylate of mercury, .	gr. $\frac{1}{6}$.
	Water, ...	f℥iv.

The injections to be used three times daily. At the end of three or four days the discharge, as a rule, becomes mucous in character, when the remedy is to be discontinued. For chronic cases he recommends the same drug in a strength of 5 centigrammes to 100 grammes of water.—*L'Union Médicale; Weekly Med. Rev.*, February 7, 1891.

PINE-APPLE IN TAPE WORM.

Dr. F. H. Lutterloh, of Anthony, N. M., writes us as follows (Medical World): "In 1875, in the State of Vera Cruz, Mexico, I was called to see a Miss L., about 10 years old, who had passed several segments of tape-worm about 6 inches in length, some of which I saw. I at once prescribed that she eat half of a large, ripe pine-apple. She forthwith did so, finding it a most ageeable medicine. In the course of twelve hours she had an evacuation, in which was about 6 feet of worm, including the head, and thus a final cure was effected, as I knew her intimately for nine years after, and no more tape-worm—*Western Medical Reporter*, February, 1891.

CHLOROFORM OINTMENT.

Kittel, according to the Druggists' Circular, recommends the use of chloroform externally in the form of an ointment. For this purpose he prescribes 1 part of chloroform, 1 part of wax, and 2 or 3 parts of lard. This mixture will keep the chloroform unaltered, and, when spread upon linen and applied to the unbroken cutaneous surface, acts quickly and with certainty as a local analgesic. Its mode of preparation is simple: The wax and lard are melted together, and, when somewhat cooled superficially, poured into a bottle, the inside of whose neck as well as its glass stopper have been well greased to make it perfectly air-tight; then the chloroform is stirred in. The bottle must be kept in a cool place until the mixture stiffens, being occasionally rotated without being opened.—*N. Y. Med. Journ.*, December 20, 1890.

CHILBLAINS WITH ULCERATIONS.

The following is the formula of the celebrated ointment of Devergie, for the cure of this troublesome disease:—

℞	Adip. suillæ, . . .	℥j.
	Goulard ext., . . .	gtt. xij.
	Pulv. opii, . . .	gr. iij.
	Creasot., ...	gtt. x.

M. Sig.: Apply night and morning, after careful ablution with tepid soap-suds.

This is said to be an excellent remedy when actual ulceration is present.—*Medical Summary*, February, 1891.

COPPER.*

The sulphate of copper enters into the composition of injections for gonorrhœa, and may be advantageously combined as follows:—

℞	Cupri sulphatis, . . .	gr. xij.
	Zinci sulphatis,	
	Plumbi acetatis, . .	āā gr. xxiv.
	Ext. krameriæ fl., . .	f℥j.
	Vini opii, ...	f℥ij.
	Aquæ rosæ, . .	q. s. ad f℥vj.—M.

℞	Cupri sulphatis, . . .	gr. v.
	Ext. geranii fl., . . .	f℥ss.
	Glycerini, ...	f℥j.
	Aquæ rosæ, ...	f℥iiss.—M.

The sulphate, or other salts of copper, may be employed externally in the following formulæ:—

℞	Cupri sulphatis, . . .	gr. v.
	Aquæ hamamelidis dest., .	f℥v.

M. For a gargle, or apply over the surface for hyperidrosis or bromidrosis.

℞	Cupri sulphatis, . .	gr. x vel xxx.
	Acidi borici, . .	℥j.
	Creasoti, ...	♏x.
	Ungt. aquæ rosæ, .	℥j.

M. Useful in sycosis and parasitic diseases of the skin.

*From advanced sheets of Shoemaker's work on Materia Medica and Therapeutics, now in press.

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TREATMENT BY MASSAGE.

UNLESS we greatly err, this mode of treatment has not yet been as generally adopted and widely utilized by the profession as its merits undoubtedly deserve. On the one hand, there exists a body of trained *masseurs* and *masseuses* whose rate of charges places them beyond the reach of those belonging to the humbler walks of life; on the other, a horde of adventurers who know little or nothing of the art have debased it in popular estimation. Under these circumstances, many a young physician would be wise to perfect himself in the proper manipulations and movements. Not only would he, in many instances, have the satisfaction of affording his patients speedy and complete relief without an absolute dependence upon drugs, but also—a fact not to be despised—he would soon find his services in request by his brother physicians, to the material increase of his annual income. His knowledge of anatomy and physiology should render easy the acquisition of the *technique*. The primary movements of massage are four in number,—friction, percussion, pressure, and movement. A combination of pressure and movement constitutes deep rubbing or kneading. The best results are generally obtained from a combination or succession of movements. Manipulations should be executed from the extremities toward the trunk in the direction of the muscular fibres; that is, as a rule, from the insertion toward the origin of the muscles. Pressure should be slight at first, then gradually increased, and again diminished toward the end of the act. In operating, it is convenient to divide the body into a number of regions of convenient size and boundaries. Deep rubbing, kneading, or malaxation is performed by grasping between the fingers as broad a surface as possible, pressing and rolling the deeper tissues, and with them the integument. It is advisable to begin with sittings of not more than fifteen minutes. The time can be gradually lengthened to half an hour or more.

The effect of massage is to strengthen and quicken the circulation through the integument, to promote its secretions and the interchange of gases which takes place through the skin. The terminal nerve-fibres and their end-organs are at the same time gently stimulated. Deep manipulation improves the intra-muscular circulation, and is an admirable restorative of depressed motor function. The circulation and, to some extent, the composition of the lymph and blood are influenced, and the activity of the lymph-glands is stimulated. Massage contributes to the restoration of exhausted nervous energy. Restlessness and pain are relieved, and sleep is promoted. Massage of the abdomen excites peristalsis, and the ovaries or testes are stimulated. Appetite and digestion are improved, the heart strengthened, respiration is deepened, and oxygenation increased.

In many diseases of the skin massage is of decided service. Owing to its power of inducing absorption of inflammatory deposits, it is of value in the treatment of acne indurata and chronic eczema. It is of avail in ecthyma by improving the general nutrition. The anguish of herpes zoster is often relieved by massage performed over the course of the affected nerve. Deep manipulation has accomplished good in elephantiasis.

This species of passive exercise is decidedly beneficial in many disorders involving the muscular system. It obviates degenerative changes incident to enforced disuse of the muscles, and relieves the pain and stiffness of muscular rheumatism. In organic and functional disease of the nervous system it is no less efficient. Neuritis, sciatica, and the lancinating pains of locomotor ataxia are ameliorated by massage. Progressive muscular atrophy is delayed in its course. In lead paralysis and infantile paralysis this therapeutic method has proved extremely beneficial. As it promotes the nutrition and function of the ovaries, massage is valuable in the treatment of amenorrhœa, while it is often able to assuage the pain of dysmenorrhœa. The procedures introduced by Thure Brandt

have been found efficacious in prolapse and subinvolution of the womb, and have led to absorption of adhesions due to uterine or peri-uterine inflammation. Chronic constipation is corrected by manipulations following the course of the large intestine, and it is wise to have recourse to massage before performing laparotomy for volvulus or invagination. Massage over the stomach encourages secretion and muscular movements, improves the appetite and digestion.

This is a particularly efficacious method in affections of the joints. Its results are admirable in the case of sprains. The earlier the treatment is instituted, the more rapid is the recovery. The duration of the ill effects is materially curtailed. Chronic synovitis, whether or not of rheumatic origin, and rheumatoid arthritis are benefited by this treatment.

Masso-therapeutics has been employed by ophthalmologists in many diseases of the eye. We entertain a strong conviction that a more extended employment of this mode of treatment would surprise and gratify medical men, not only in the diseases briefly alluded to, but also in many others, and that it would contribute to the improvement of many stubborn and vexatious cases.

THE ORGANISM OF CANCER.

IN our last issue we reproduced the views and investigations of Albarran, Darier, and others concerning the parasitic origin of malignant disease. According to these studies the conclusion appeared probable that, at least in some cases, psorosperms are the cause of cancerous infection.

The same subject has engaged the attention of a British authority, Dr. William Russell, of the Edinburgh School of Medicine, who described his researches in an address to the London Pathological Society, December 2, 1890, and whose remarks are published in the British Medical Journal, December 13, 1890. An abstract of this paper will acquaint our readers with the most recent utterances upon this interesting and important question.

In studying sections from 45 cases of carcinoma, Dr. Russell, in no less than 43 of these, found peculiar and hitherto undescribed bodies. They were brought into view by a method of double staining. When fuchsin was first employed and the section afterward placed in Grüber's iodine-green solution, the latter displaced the former color in every part except the bodies indicated. For the purposes of description, therefore, the name of "fuchsin bodies" was tentatively applied to them by Dr. Russell. These organisms correspond to no nuclei of normal or pathological cells, nor do they present the appearance of any degeneration material. It may, consequently, be fairly assumed that they are foreign to the human tissues and, from their frequent occurrence, that they are concerned in the origin of carcinoma. Dr. Russell tells us that the fuchsin bodies may be present in the small-celled infiltration at the margin of the growth or among and in the epithelial cells of the alveoli. They are also found in the stroma and lymphatics. As a rule, they occur in groups consisting of 2 or 3 to 20 or more, and are almost always surrounded by a clear space. In form they are perfect spheres, but vary greatly in size, the largest being three times the size of the smallest. The largest are described as half as large again as the red blood-corpuscle. The clear space or vacuole which surrounds each group and most of the isolated bodies might easily be mistaken for a capsule, and the "body" for an encysted psorosperm. Dr. Russell does not, however, regard the vacuole as a capsule, since the free edges of the epithelial cells may be made by focusing to assume an identical appearance. But the distinctive feature which distinguishes fuchsin bodies from psorosperms is their mode of development. This takes place as follows: From the surface of a large fuchsin body a small globular bud protrudes and gradually increases its distance from the parent body, to which it remains attached by a delicate filament. This bud gives off a similar one, and so on until a chain of globules is formed, connected by the filaments like a row of beads upon a string. When a fuchsin body is included within a leucocyte or epithelial cell the cell-protoplasm becomes clarified, loses its capacity for staining, leaves a space or interval—vacuole—between the fuchsin body and circumference of the cell. Hence, this circumference may appear as if it were a cap-

sule engendered by the fuchsin body instead of the stained edge of a cell into which the body had penetrated.

As to the fuchsin bodies or organisms themselves, Dr. Russell concludes that they belong, without doubt, to the class of sprouting fungi. To this class belongs the yeast-plant, and the character of this fungus implies the production of a fermentation product. "Its nutrition, reproduction, and death cannot be conceived without producing in the tissues changes not disproportionate in magnitude to the anatomical changes present in cancer."

Dr. Russell's paper is accompanied by a number of excellent illustrations, some of which are colored, of the organism which he has discovered. We are therefore able to form a fair idea of the microscopical appearance. Not only were the fuchsin bodies observed in almost every case of cancer examined, but, with a few exceptions in which the diagnosis was doubtful, they were detected in no other neoplastic tissue. Whether they are concerned in the actual production of carcinoma is a difficult question. At this point of the question it is eminently desirable that the "fuchsin bodies" of Russell and the psorosperms of the French observers should be submitted to the *experimentum crucis*, viz., isolation, cultivation, and inoculation.

MEDICAL NEWS AND MISCELLANY.

DR. HARRY JACOBS, of Altoona, has removed to Philadelphia.

DR. CONRAD BERENS has removed to 1833 Chestnut Street, Philadelphia.

SEVEN States of the Union have medical colleges admitting women, and there are ten colleges exclusively for women, and over thirty that admit both sexes.

DR. KLEAR, of Karsbad, Austria, visited Philadelphia last month, and called upon the editor. We much regret that we were not at home to receive the doctor, and had he left his address we would have paid in return our respects to him.

ST. TIMOTHY'S HOSPITAL.—The following physicians have been elected as the Medical Board of St. Timothy's Hospital, Roxborough: William C. Todd, James Sibbald, D. D. Custer, and O. A. Rath, Surgical Staff; Ross R. Bunting, M. Howard Fussel, Alfred H. Mellersh, and William C. Cahill, Medical Staff. The Board organized by electing Dr. W. C. Todd, President, and Dr. Ross R. Bunting, Secretary.

REMOVAL.—With the beginning of the present year the office of the Archivio Italiano was removed to Genoa, Prof. E. Maragliano assuming the editorial supervision. The journal is published, as before, by Dr. Francesco Vallardi, Piazza Fontane Morose, Angolo via Migliorini, Genova.

The Archivio Italiano is a periodical of distinguished excellence, in whose pages are to be found valuable clinical and pathological memoirs by the chief scientific physicians of Italy.

AMERICAN MEDICAL COLLEGE ASSOCIATION.—The next meeting of the American Medical College Association will convene at the Arlington Hotel, Washington, D.C., at 8 o'clock P.M., May 4, 1891. The indications point to a very interesting session and a representation from a large majority of the colleges of the United States. The special committee on permanent organization is at work, and will be ready to report at this meeting.

TO OUR PATRONS.—It is with regret that we are compelled to announce the fact that the plant of our Company was practically destroyed by fire on the evening of Wednesday, February 25th. Though a blow with considerable force between the eyes, yet we propose to continue business at the old stand, and be out with our publication nearly on time for April.

Very truly yours,
DANBURY MEDICAL PUBLISHING CO.

POETRY ABOUT A MILWAUKEE SURGEON.—A little versification now and then is relished by the sternest of medical men, especially if it be about Professor Senn. Dr. G. Dewey, a Missourian poet, has composed the following lines regarding specialism in medical practice:—

"The body has been parcelled out,
For doctors' benefit, no doubt,
Divided up so very nice
That every one can get a slice.
To one they gave the fingers, one the toes,
Another gets the eyes and nose;
A third, more greedy for his part,
Has gobbled up the lungs and heart.
For his untiring, ceaseless pen,
They gave the pancreas to Senn."

— *Journal Amer. Med. Association.*

THE Mississippi Valley Medical Association will hold its seventeenth annual session at St. Louis, Wednesday, Thursday, and Friday, October 14, 15, and 16, 1891. A large attendance, a valuable program, and a good time are expected. The members of the medical profession are respectfully invited to attend. C. H. Hughes, M.D., President, 500 N. Jefferson Avenue, St.

Louis; E. S. McKee, M.D., Secretary, 57 West Seventh Street, Cincinnati; I. N. Love, M.D., Chairman Committee of Arrangements, 301 N. Grand Avenue, St. Louis.

DR. JOHN AULDE, whose name appeared as co-author with Dr. Shoemaker, of Philadelphia, of Vol. I of the "Treatise on Materia Medica, Pharmacology, and Therapeutics," has taken the unusual and not very generous course of circularizing British medical men for the purpose of repudiating any connection with Vol. II of the work, the use of his name in that respect being, says he, totally unauthorized. The best men may quarrel, but it is difficult to conceive of circumstances which could justify the concluding paragraph of this little, vicious communication, that "for good and sufficient cause my association with the publisher and *reputed* author was severed several months ago." On the whole, we have come to the conclusion that Dr. Aulde must have a very uncontrollable temper of his own.—*London Medical Press*, Feb. 11, 1891.

THE EYE IN EPILEPSY AND INSANITY.—Dr. Chas. A. Oliver (American Journal of Medical Science) says:—

First.—In idiopathic epilepsy of the male adult, even where the stage of dementia has been reached, both the intra-ocular and the extra-ocular motor-groupings seemingly, as a rule, remain unimpaired, both as to innervation and to active impulse, although in some instances curious innervations and limitations of action seem to exist.

Second.—In the lower grades of imbecility, as seen in the male adult, which have resulted from malformation or disease of a minor degree than that producing so-called idiocy, that have supervened in infancy or occurred before birth, both the intra-ocular and the extra-ocular muscle-groupings, as a rule, remain unaffected, both as to innervation and as to proper action; in fact, they seem ordinarily to retain their original condition without any pronounced indications of wear and tear; a condition that most probably evidences very little abuse of a delicately poised muscular apparatus.

Third.—In the second stage of paresis, as seen in the male, both the intra-ocular and the extra-ocular motor-groupings are in all instances more or less paretic, as evidenced by inequalities and irregularities of pupillary areas, with peculiarities in iritic movement and loss in ciliary tone and power, as well as by extra-ocular insufficiencies and ataxic nystagmic motions—all indicative of imperfect muscle-innervation and inadequate muscle-action.—*American Lancet.*

FIRST ANNUAL REPORT PASTEUR INSTITUTE, NEW YORK.—Dr. Paul Gibier, Director of the Pasteur Institute, begs to inform you of the results of the preventive inoculations against hydrophobia performed at this Institute during the first year of its existence (February 18, 1890, to February 18, 1891). Eight hundred and twenty-eight persons, having been bitten by dogs or cats, came to be treated. These may be divided in two categories;—

1. For 643 of these persons it was demonstrated that the animals which attacked them were not mad. Consequently the patients were sent back, after having had their wounds attended, during the proper length of time, when it was necessary.

2. In 185 cases the antihydrophobic treatment was applied, hydrophobia of the animals which inflicted bites having been evidenced clinically, or by the inoculation in the laboratory, and in many cases by the death of some other persons or animals bitten by the same dogs. No death caused by hydrophobia has been reported among the persons inoculated. Indigents have been treated free of charge.

The persons treated were: 81 from New York, 27 from New Jersey, 16 from Massachusetts, 11 from Connecticut, 9 from Illinois, 5 from Georgia, 5 from North Carolina, 5 from Pennsylvania, 3 from Maryland, 3 from Missouri, 2 from New Hampshire, 2 from Texas, 2 from Kentucky, 2 from Ohio, 1 from Maine, 1 from Arizona, 1 from Minnesota, 1 from Iowa, 1 from South Carolina, 1 from Nebraska, 1 from Rhode Island, 1 from Arkansas, 1 from Virginia, 1 from Louisiana, 1 from Indian Territory, 1 from Ontario, Canada.

With kindest regards of the Pasteur Institute,

PAUL GIBIER.

MEDICAL SOCIETY OF THE STATE OF PENNSYLVANIA.—The forty-first Annual Meeting will be held in Reading, on Tuesday, Wednesday, Thursday, and Friday, June 2, 3, 4, and 5, 1891, commencing on Tuesday, June 2d, at 9 A.M.

Appointments for 1891.—(1) Address on the Practice of Medicine, Dr. J. Chris. Lange, Pittsburg; (2) address on Surgery, Dr. O. H. Allis, Philadelphia; (3) address on Obstetrics, Dr. J. Milton Duff, Pittsburg; (4) address on Mental Disorders, Dr. Samuel Ayres, Pittsburg; (5) address on Ophthalmology, Dr. J. A. Lippincott, Pittsburg; (6) address on Hygiene, Dr. A. B. Brumbaugh, Huntingdon.

To be acted upon: report of the Committee on the Revision of the Constitution, Dr. W. M. Welch, chairman; report of the Committee on Incorporation, Dr. C. W. Dulles, chairman. Chairman on Committee of Arangements, Dr. Samuel L. Kurtz, corner Fifth and Bingaman Streets, Reading, to whom all applications to read papers at this session should be sent not later than April 1st. Secretaries of county medical societies are earnestly requested to forward at once complete lists of their officers and members, giving the post-office address of each. Every

delegate, before admission, shall present a certificate of delegation, signed by the president or secretary of his county society. Every permanent member (not a delegate), before admission, shall present a certificate of good standing in his county society (extract from constitution). Railroad facilities will be announced when obtained. All who desire excursion orders should notify the Permanent Secretary, stating which railroad must be used.

WM. B. ATKINSON,
Permanent Sec'y.

A VALUABLE WORK.—P. Blakiston, Son & Co., medical publishers of Philadelphia, announce for early publication, "A Hand-Book of Local Therapeutics," being a practical description of all those agents used in the local treatment of disease, such as ointments, plasters, powders, lotions, inhalations, suppositories, bougies, tampons, etc., and the proper methods of preparing and applying them.

The diseases which chiefly require local treatment are those of the respiratory passages, ear, eye, skin, together with certain general surgical affections, including the diseases of women. In order, therefore, that the various uses of each remedy may be thoroughly set forth, the following gentlemen have assumed the authorship: Harrison Allen, M.D., Emeritus Professor of Physiology in the University of Pennsylvania, Laryngologist to the Rush Hospital for Consumption, late Surgeon to the Philadelphia and St. Joseph's Hospitals; George C. Harlan, M.D., late Professor of Diseases of the Eye in the Philadelphia Polyclinic and College for Graduates in Medicine, Surgeon to the Wills Eye Hospital and Eye and Ear Department of the Pennsylvania Hospital; Charles B Penrose, M.D., Surgeon to the German Hospital, Instuctor in Clinical Surgery of University of Pennsylvania; and Arthur Van Harlingen, M.D., Professor of Diseases of the Skin in the Philadelphia Polyclinic and College for Graduates in Medicine, late Clinical Lecturer on Dermatology in Jefferson Medical College, Dermatologist to the Howard Hospital.

Each remedy will be taken up in alphabetical order, and, after a succinct description of their pharmaceutical properties by Dr. George I. McKelway, will be considered with reference to the local treatment of the affections above outlined. The authors believe that the information contained in this work will not be found elsewhere. The activity in the various lines of special medicine is one of the most striking phases of the times, and has materially changed many of the older methods of treating disease by local means. The greater part of the literature which has appeared is not accessible to most physicians. The hand-book, it is believed, will be of value to general practitioners as well as to those who, like themselves, are especially interested in subdivisions of the clinical field.

The work will form a compact volume of about 400 pages, arranged in a manner to facilitate reference, and containing, besides the usual index, a complete index of diseases, which will greatly enhance its usefulness.

PROFESSOR VIRCHOW ON KOCH'S REMEDY.—The remarks made by Professor Virchow on the specimens that he showed at the discussion on Professor Fraenkel's paper at the Berlin Medical Society, on Wednesday evening of last week, are calculated to give pause to those who, having seen cases of tuberculosis treated by Koch's method, have thought that all that was necessary in order to treat phthisical patients in the same fashion was a bottle of lymph and one of Koch's hypodermatic syringes.

That a careful study of the nature, the extent, and the position of the tuberculous lesion was desirable has been gradually forced home, but that, in addition, the most careful selection of cases to be treated was absolutely necessary had scarcely entered into the calculations of some of those who considered themselves qualified to carry out Koch's method of treatment. We say this advisedly, as, from the nature of the cases recorded in the report of Virchow's "remarks," it will be gathered that even those most directly under the influence of Koch's own personality and teaching have not been able to differentiate the cases likely to receive benefit from the injection of the lymph from those which would probably be injured by the same treatment. Virchow and his pupils have now had the opportunity of examining a number of cases that have been treated, and much light is thrown on the nature of the processes that occur during the course of treatment. The most remarkable fact that is brought out in these cases is, that, in the human subject at any rate, we cannot depend on the disintegration of small tuberculous nodules taking place even in those cases in which we should naturally expect that such change would occur. It is found even in cases where the injections have been made very shortly before death, and for a considerable period previous to that time, that when the patient succumbed young tuberculous nodules, especially on the serous surface, were frequently seen; and in these there was not the slightest trace, even under the microscope, of the degenerative changes which are so characteristic of tubercle that has reached a certain stage of development.

We must assume, therefore, that the nature of the changes that occur in the human subject after the injection of the "lymph" are not the same in all respects as those that followed Koch's experimental injections.

The next most important fact brought out is, that Koch's statement that the bacilli are not killed is undoubtedly correct. Virchow, moreover, holds that not only are they not localized in a very large number of cases, but that there is actually an increased tendency to the formation of metastatic tuberculous nodules or areas, even at considerable distances from the original tuberculous focus. It has been stated that in the case of lupus the reaction—that is, the intense congestion and infiltration with leucocytes of the tissues that succumb—is usually localized, but in the case of the internal organs this localization is not nearly so defined, although the hæmorrhages and hæmorrhagic infiltrations are always most marked in the granulation tissue of the tuberculous areas.

In the lymphatic glands, near the tuberculous foci, there is usually extreme swelling, much congestion, and great proliferation of the cells in the interior of the glands; the number of the leucocytes is increased in the blood, and it appears that to this increase of the leucocytes the cellular infiltration around the dilated and imperfectly developed vessels of the granulation tissues is due, especially when the blood-stream is slowed in consequence of the intense inflammatory congestion. A most important question is that associated with the nature of certain changes found in the lower lobes of the lung in cases of chronic apical phthisis that have been treated by injection. In one case, up to the time when the injections were commenced, there had been no trace of any consolidation in the lower lobes of the lung; but, after six injections had been made, persistent fever came on, and infiltration of the lower lobe was diagnosed. When the patient died it was found that we had here the pathological changes that are usually associated with acute phthisis, secondary to a chronic apical tuberculosis with cavity formation; it differed only from other cases of the same kind in that it was more rapid in its course and the post-mortem changes gave evidence of a more acute process than is usually met with.

From a careful consideration of this case it would appear that the injection did its work in the usual fashion, but too well; the local reaction was obtained, death and separation of the tuberculous tissues in the wall of the cavity were obtained; but the sloughs, in place of being expectorated as they usually are in cases of ordinary phthisis, where the disintegration and separation takes place but slowly, were detached in large quantities and were drawn, partly by inspiration and partly by gravity, into the bronchi of the lower lobes of the lung. Thence they made their way into the smaller terminal branches and set up the mixed fibrinous and catarrhal pneumonia characteristic of this condition, with the well-known patches of caseous degeneration at the usual intervals. Other cases of a similar kind were shown, from which the lesson to be learned is only too obvious.

Another danger—also the result of this rapid and extensive sloughing—is met with in the intestine, where, contrary to the usual course of events, there was at the base of the tuberculous ulcer either perforation or extreme thinning which would have soon ended in perforation.

Beyond these more or less mechanical or gross pathological methods of extension, it must be borne in mind that, owing to the dilatation of the blood- and lymph-channels, especially where the cell reaction is not good, the way is opened up for the ready transportation of tubercle bacilli from the original foci to parts situated either near to or at some distance from them. Virchow found abundant evidence of this in a case of tuberculous endocarditis,—a condition that is not very frequently met with. One of the most important lessons to be learned, however, is that a patient in an advanced stage of phthisis, in whom, on account of imperfect nutrition and especially as the result of imperfect oxidation, the general tissue-cells are in a condition of lowered vitality, an irritant or stimulant, such as Koch's lymph appears to be, set up a reaction of degeneration in place of increased vitality. In these cases, in fact, the lymph acts on the weakened cell as an extremely powerful irritant would on a healthy cell, the cells so powerfully stimulated being able to offer little resistance either to the attacks or to the passage of the vigorous tubercle bacilli.

In taking up this ground, we wish it to be most distinctly understood that we can as yet offer no opinion as to the effect these observations of Virchow's will have on the methods of carrying out Koch's treatment. We feel, however, justified in saying that such a careful and complete account of the anatomo-pathological changes met with in these tuberculous patients who have been subjected to it will prove of enormous value in drawing the attention of physicians and surgeons to the fact that such treatment requires to be used with care and discrimination, directly proportionate to the powerful action which this remedy appears to exert both generally and locally. This is especially the case in patients who, though not necessarily far advanced in phthisis as measured by the number and extent of the tuberculous areas, are nevertheless, by reason of imperfect nutrition, of weakened thoracic muscular system, or of a want of habit of expectoration, totally unfit to be subjected to the risk of having set free in their organs or tissues masses of dead tissue in which active tubercle bacilli may be present in enormous numbers. Such patients, if inoculated at all, should be only so treated after a prolonged and careful nursing; whilst as regards many of them it can never be hoped that they will derive

the smallest benefit from the treatment. It is evident, too, that in advanced cases of phthisis it can prove of little value, but for this Koch's own statement should have been sufficient to make every one fully prepared.

In conclusion, we would say that any one who thinks of carrying out Koch's treatment should first make himself thoroughly master of Koch's original statements, which are calm to a degree, and are as unbiased as any man could expect those of an author of such a method to be. The method is still on trial, and those who wish to keep an open mind can only do so by a careful study of scientifically observed facts as they are placed before us.—Ed. *Brit. Med. Jour.*

BOOK REVIEWS.

Text-Book of Hygiene. A Comprehensive Treatise on the Principles and Practice of Preventive Medicine from an American Stand-Point. By GEORGE H. ROHE, M.D., Professor of Obstetrics and Hygiene in the College of Physicians and Surgeons, Baltimore; Director of the Maryland Maternité; Member of the American Public Health Association; Foreign Associate of the Société Française d'Hygiène, of the Société des Chevaliers, Sauveteurs des Alpes Maritimes, etc. Second edition. Thoroughly revised and largely re-written, with many illustrations and valuable tables. F. A. Davis: Philadelphia and London. 1890. 8vo, pp. 421.

In the second edition of this work it has been enlarged and revised, making it a complete treatise upon hygiene, from the American, which is the practical, stand-point. Various questions, arising in connection with the physician's daily intercourse with the sick, are here considered and answered intelligently and intelligibly. It is now used as a text-book in some of our leading colleges, and is beyond question the best work upon the subject that could be put into the hands of students. In its twenty-two chapters are considered the hygiene of air, water, food, and soil; the removal of sewage; construction of habitations and hospitals; military and naval hygiene; the germ theory of disease; antiseptics, vital statistics, etc. The pages are well printed and freely illustrated. In every part of the book the effects of careful revision are apparent, and important additions have been made incorporating the advances made in sanitary science since the first edition was issued. The thanks of the author are tendered to Medical Director Albert L. Gihon, United States Navy, for revising the chapter on "Naval Hygiene," and to Surgeon Walter Nyman, United States Marine-Hospital Service, for supplying the chapter on "Quarantine." The bibliography placed at the end of each section is a valuable addition. Altogether, this work forms the best book of reference for daily use that can be placed in the hands of the physician who finds himself not fully posted upon modern advances in hygiene, as it is the best text-book on this subject for the student. Under such circumstances it will not be necessary to select certain portions of the work for praise, since such proceeding would reflect upon other parts that were not mentioned.

Principles of Surgery. By N. SENN, M.D., Ph D., Milwaukee, Wis., Professor of Principles of Surgery and Surgical Pathology in the Rush Medical College, Chicago, Ill.; Professor of Surgery in the Chicago Polyclinic, etc. Illustrated with 109 wood-engravings. F. A. Davis: Philadelphia and London. 1890. 8vo, pp. 611.

If, as will doubtless be generally admitted, our ideas of surgical pathology have undergone a complete revolution within the last twenty years, and especially during the last decade, it is not that the facts, formerly in our possession, have been proven false, but it is because the immense acquisitions which have been gained in that time, especially regarding the etiology of disease, have placed the old observations in a new light, and made them yield different deductions. Hence there has arisen a complete change not only in the practical details of surgery, but in our way of regarding various morbid surgical processes. Tuberculosis of the joint is a much more comprehensive title than white swelling, or Pott's disease, and necessitates constitutional treatment which previously was a matter simply of judgment and general policy. Suppuration and inflammation now merely represent the reaction of tissues under the pernicious activity of pathogenic microbes, whose names are duly now recorded in our text-books. The principles of surgical pathology now comprise a large number of infectious diseases, most of which were unknown to the preceding generation of physicians, and all of which are of great importance in their bearing upon clinical surgery. The present work is somewhat on the plan of Billroth's "Pathology," but reveals in every department the great advances made since that work appeared. Senn's "Principles" deals chiefly with the pathological aspect of surgery, and is a complete *résumé* of existing knowledge of the subjects discussed.

On Severe Vomiting During Pregnancy. A Collection and Analysis of Cases, with Remarks on Treatment. By GRAILEY HEWITT, M.D., London, F.R.C.F., T.R.S.Ed. London: Longmans, Green & Co., and New York, 15 East Sixteenth Street. 1890.

This work comprises 147 pages, and is devoted

to a careful analysis of nausea and vomiting in pregnancy, and its causes. Notwithstanding that much has been written upon the subject of vomiting in pregnancy, it is quite evident, from the variety of theories as to its cause and the great number of remedies that are recommended as specifics for its relief, the pathology of the condition has been but imperfectly comprehended.

The writer divides the vomiting of pregnancy into two divisions: those in which the vomiting is due to some disease or condition quite distinct from pregnancy, under which circumstances the vomiting occurs independently of it, although it is possible that pregnancy may intensify the symptom. This class may be designated as "vomiting *in* pregnancy." Second, those in which vomiting is produced by, or directly dependent upon the pregnancy, "vomiting *of* pregnancy."

Pregnancy is so frequently attended by nausea and vomiting that these troublesome symptoms have come to be regarded as necessary accompaniments of gestation. It is true, however, that pregnancy in normal and healthy conditions is not, by any means, always attended by sickness. The author of this work demonstrates clearly, upon analysis of a large number of cases, that the difficulty is due to some disordered condition of the uterus itself, and, from the frequency in which the symptom is at once relieved by the correction of a malposition, leads us to appreciate that most frequently the symptom is produced by uterine displacement. So far as the influence upon the general condition is concerned, it makes but little difference whether this malposition is an ante- or retro- displacement.

Copeman, some years ago, finding a patient was becoming exhausted under the influence of continued vomiting, proceeded to bring about an abortion by the dilatation of the cervix. After the cervix was dilated the nausea and vomiting ceased, and, acting upon this fortunate result, no further proceedings were taken to bring about the abortion. The fortunate result in this patient led him to believe that the vomiting was due to a rigid os, and to suggest in subsequent cases the dilatation of the cervix as a therapeutic measure. The author inclines to believe that in dilating the cervix, a malposition of the uterus, possibly impacted anteflexion or version, was corrected; and to this, and not to the dilatation of the cervix, was due the relief obtained.

By the close analysis of a large series of cases, by his clear demonstration of the influence of uterine displacements in the development of such aggravated symptoms, by the formulation of proper methods of procedure, the writer has done much to throw light upon a field which has heretofore been greatly obscured by the diversity of theories as to the causes and proper methods of combating them.

The work is one well worthy of careful study and a place in the library of every physician who largely practices obstetrics. It is provided with a number of plates, illustrating the influence of displaced positions of the uterus, and the instruments in position to retain the organ when replaced. The general preparation of the work is excellent.

Causes and Treatment of Sterility in Both Sexes: Fecundation by Artificial Methods. Translated from the French, with notes, by CHARLES EVERETT WARREN, M.D., 151 Union Square, Boston, Mass. Printed for private use only by the profession.

This small book contains much upon the physiological action of the sexual organs which will be of service to all practitioners. It treats of the subject in such a scientific manner as to be of interest to the reader. The language is well chosen, well expressed, and the practical deductions are of value. The translation has been admirably made by Dr. Warren and the useful notes added by him have made the work far more interesting. The book is compact and illustrated by the French style of art, quite popular in that country, but a little too expressive for Americans.

History and Pathology of Vaccination. Vols. i and ii. A Critical Inquiry. By EDGAR M. CROOKSHANK, M.B, Professor of Comparative Pathology and Bacteriology in, and Fellow of, King's College, London. P. Blakiston, Son & Co., 1012 Walnut St., Philadelphia, Pa. 1889.

The first volume of this very extensive and most thorough account of vaccination covers 466 pages. The author has traced the history of small-pox vaccination from the earliest time to the present day. Crookshank, who is a most interesting writer, states that it has been suggested, not unnaturally, that, as the Arabian physicians were acquainted with the nature and treatment of small-pox, they were probably the first to whom it occurred to produce the disease by inoculation. A. Vicenna, who resided on the east coast of the Caspian Sea, has, he added, been accredited with this discovery. He further points out that this practice was supposed to be carried by Tartar and Chinese traders to Surat, Bengal, and China, and by the Mohammedan pilgrims to Mecca. Woodville, on the contrary, denies, the author adds, this theory. In a like way, our author carefully lays before the reader the earliest accounts of inoculation in Turkey, Africa, India, France, Spain, Italy, Germania, Austria, Denmark, Sweden, Switzerland, Russia, America, and in Great Britain and Ireland. Probably the most interesting portion of this wonderful historical work is that referring to the

claims of Dr. Benjamin Gesty to being the first to practice inoculation. The book, at this part, abounds in letters of rare value, setting forth the opinions of that day. On page 122, Crookshank reproduces the inscription upon the tombstone of Gesty, which reads: "He was born at Yetminister, in this county, and was an upright, honest man; particularly noted for having been the first person (known) that introduced the cow-pox by inoculation, and who, from his great strength of mind, made the experiment from the cow on his wife and two sons, in the year 1774." On the other hand, the author follows with an excellent description of the life, letters, and claims of Edward Jenner; much of this testimony is new, some has been presented before the public and profession before to substantiate the rights of this great discoverer. All the phases of vaccination are portrayed in the latter part of this volume, together with most vivid appearances of the lesions of small-pox in beautiful lithographic plates.

Volume II in a like manner abounds in the literature of inoculation, by such writers as Edward and Henry Jenner, Woodville, Pearson, Loy, Rogers, Birch, Bousquet, Estlin, Ceely, Badcock, and Loyet. Crookshank concludes this volume with an account of the outbreak of cow-pox near Cricklade (Wiltshire) in 1887.

Both volumes furnish all the literature upon this important subject arranged in a convenient way for a ready and rapid reference. The author has fulfilled his difficult task in a most practical manner, producing two volumes of inestimable value. The publishers, in this connection, deserve to be especially commended in giving for a very small sum of money a work of great value. The paper is unusually good, heavy, and with a clear-faced type that makes the reading pleasant and easy. In truth, it is rare to find in two such volumes the handsome appearance exhibited by this work.

What is Love? By PAUL BOURGET. Translated by CAMDEN CURWEN. Illustrated. Worthington Company, 747 Broadway, N. Y. 1891.

Novels are often most relaxing and interesting for the busy physician. They prove of great benefit to one, refreshing the mind by the rest and amusement offered, especially if the text is good. This small but good book has a story that will attract the attention, and give the reader much relaxation and pleasure. The translation has been well made, and the book is placed before the public in a suitable form.

Modern Treatment of Headaches. By ALLAN MCLANE HAMILTON, M.D. George S. Davis, publisher, Detroit, Mich.

A book possessing all the practical and modern views expressed by Dr. Hamilton in No. 6 of this series is of great service to all physicians. A large number of very good prescriptions are given, and the latest and most approved applications of electricity are likewise to be found in this work.

One of Cleopatra's Nights, and Other Fantastic Romances. By THEOPHILE GAUTIER. Faithfully translated by LAFCADIO HEARN. Worthington Company, 747 Broadway, N. Y. 1890.

Here is another very interesting novel, the literature being light, but suitable to one who wishes to pass the time pleasantly and be instructed. The story abounds in some very striking but good expressions that will keep up the reader's interest from the beginning to the end of the book.

Adventures on the Mosquito Shore. By E. GEORGE SQUIER, M.A., F.S.A., with 66 illustrations. Worthington Company, 747 Broadway, N. Y. 1891.

A peculiar, pleasing story, placed before the reading public, is to be found in the text of this novel. Doctors, who are always fond of attractive and amusing reading, will find in this book much matter to while away the spare moments.

Articulation and Percussion. By FREDERICK C. SHATTUCK, M.D., Professor of Clinical Medicine in Harvard University, Visiting Physician Massachusetts General Hospital, etc. George S. Davis, Detroit, Mich. 1890.

The author of this small volume has given the reader much practical usefulness. Auscultation and percussion are well illustrated on some very good plates that are to be found in the first part of the book.

The Daughter: Her Health, Education, and Wedlock. By WILLIAM M. CAPP, M.D.

This small volume, printed upon good paper and with clear and attractive type, forms a beautiful book, that can be conveniently carried about for reading. The book is not only pleasing in appearance, but abounds in thoughts of the greatest value to men, women, and girls. The author speaks in two chapters of the infant and child, pointing out very useful lessons to all mothers. The girl and wife are described in the text in such a manner as to convey good and valuable precepts at both these periods of life.

Quiz Compends, No. 14. A Compend of Diseases of Children. Especially adapted for the use of medical students. By MARCUS P. HATFIELD, A.M., M.D., with a colored plate. P. Blakiston, Son & Co., No. 1012 Walnut Street, Philadelphia. 1890.

In a very concise way Dr. Hatfield has described in this little book the diseases of chil-

dren. The classification is good, the text well arranged, and the advice well given to the reader. A very excellent plate in the front of the book well illustrates the fœtal circulation, and will be of much advantage to the student.

The Catalogue of the Wilmington Dental Manufacturing Company for 1890.

This pamphlet is well bound and embraces all the latest additions to the outfit of the dental surgeon.

Annual of Eclectic Medicine and Surgery. A Yearly Report of the Observation, Investigation, and Experience of the Eclectic Physicians of America, etc. Record of 1890, vol. i. Edited by FINLEY ELLINGWOOD, M.D., Professor of Clinical Medicine; late Professor of Medical Chemistry, etc., in the Bennett Medical College, Chicago. 3926 Indiana Avenue, Chicago, Ill.

This book embraces papers and reports, with portraits of the men who have been especially active in the famous eclectic medical societies. A table of contents would be of much assistance to the reader. The work is well bound, but many of the papers could have been cut down somewhat, and with much advantage to the editor. They include very many facts long since alluded to in the various text-books.

The Annual Report of the Supervising Surgeon-General of the Marine-Hospital Service of the United State for the Fiscal Year, 1890.

Dr. John B. Hamilton has again produced a volume of value both to the service and to the profession. It abounds in good views. The cuts are fine, the description of cases remarkable, and the statistics of the greatest service for the present as well as the future.

Text-Book of the Diseases of the Ear. By DR. JOSEF GRUBER. Translated from second German edition by special permission of the author and edited by EDWARD LAW, M.D., C.M., and COLEMAN JEWELL, M.B., of London, Eng. With 150 illustrations and 70 colored figures on 2 lithographic plates. New York: D. Appleton & Co., 1, 3, and 5 Bond St. 1890.

Good work upon special subjects is often rare and lacks interest for the general practitioner. We are pleased, however, in this instance to observe a very marked exception upon a special department of medicine. The volume before us is written by one of the best known otologists in the world, and is translated from the second German edition and edited by two very prominent English physicians. An examination of the table of contents with the subject-matter of the book shows that the authors have in a most careful manner considered everything in relation to the ear. That which makes the work especially valuable is the very accurate anatomical and pathological description, admirably well illustrated throughout the text, the wood-engravings and the lithographic plates being so well executed as to enable the physician to treat himself many of the diseases of this very important organ.

Certain chapters will be found very practical, and so well arranged as to be referred to by the general practitioner with much ease. For example, the chapter on general therapeutics of diseases of the ear gives in such plain and good language all the necessary precautions and advice as to the employment of solutions by way of the external auditory canal, through the Eustachian tube and into the middle ear, as to be of the utmost value to aid practitioners. Among the many diseases included in this work of much interest we may make reference to the "Neuroses of the Sound-Receiving Apparatus." Under this head, in speaking of the treatment, the authors say for the relief of the auditory symptoms the remedies at our command are chiefly empirical, and those that have proved efficient in different instances are the various ethereal preparations and chloroform. The inhalation of two or three drops of nitrite of amyl is said to be beneficial in tinnitus by Michael, but the authors say this has not been substantiated. They allege that it produces severe vertigo and even sometimes syncope, without any good results, and its repetition is generally objected to by patients. Physicians, thus learning the practical deductions from these leading clinicians, can be spared the unfortunate results just pointed out. In the many remedies recommended by the author of this work, the bromide of potassium or sodium, in 1- to 3-gramme doses, he adds, is most efficacious for the relief of nervous tinnitus. The author prefers them to be taken at bed-time. He also suggests hydrobromic acid as being of service. All parts of this excellent text-book, especially upon the application of drugs in the treatment of diseases of the ear, will be found particularly of value to the general, as well as the special, practitioner.

Heimburg's Christmas Stories. Translated by Mrs. J. W. DAVIS. With photogravure illustrations. Worthington Co., 747 Broadway, New York. 1890.

A book well expressed and containing the many good stories that are included in this volume is always acceptable and a suitable companion. The text is admirably translated and the illustrations serve to make the reading more agreeable and pleasing.

Manual of Clinical Diagnosis. By Dr. OTTO SEIFERT and Dr. FRIEDRICH MUELLER. Translated from the fifth German edition, enlarged and revised, with the permission of the authors,

by WILLIAM B. CANFIELD, A M., M D. (Berlin), Fellow of the American Academy of Medicine, etc., etc. Second English edition, revised and enlarged, with 50 illustrations and 1 colored plate. G. P. Putnam's Sons, New York, 27 West Twenty-third St., and London, 27 King William St., Strand. 1890.

Clinical medicine has made very decided advance within the last few years by the activity shown by the workers in this department. The two German clinicians, as well as Dr. Canfield, have certainly added much to our collected knowledge in this branch by the very interesting book before us. Fourteen chapters are included in this work, which treats of the blood, temperature, organs of respiration, the sputum, laryngology and rhinoscopy, the circulatory system, the digestive and abdominal organs, the urine-producing system, transudations and exudations, parasites, the nervous system, analysis of the pathological increments, and metabolism and nutrition. In truth, the entire domain of clinical medicine is carefully, accurately, and scientifically reviewed, the authors advancing many opinions of the greatest value toward forming a diagnosis. The chapters upon the blood-sputum and temperature are especially original, and would alone make the book of great service to physicians. The tables, especially of doses and composition of foods, are well arranged and of much value. The illustrations, particularly the lithographic one showing the bacilli of various diseases, is well executed and will be of much assistance to all physicians in clinical work.

Plain Talks on Electricity and Batteries, with Therapeutic Index. For general practitioners and students of medicine. By HORATIO G. BIGELOW, M.D. Philadelphia: P. Blakiston, Son & Co., 1012 Walnut St. 1891.

The author of this small work has been known as one of the most active physicians upon his investigations upon electricity. He has furnished the profession one of the most compact and original little books that can be carried in the pocket and consulted with advantage upon this modern therapeutic agent. The book is well written and illustrated with some very good and practical cuts.

A Compend of Gynæcology. By HENRY MORRIS, M.D., late Demonstrator of Obstetrics and Diseases of Women and Children in the Jefferson Medical College, Philadelphia. With 45 illustrations. P. Blakiston, Son & Co., 1012 Walnut Street, Philadelphia. 1891.

The author of this book shows, by his judicious arrangement, a keen knowledge of the needs of the medical student. He has condensed this very important subject in a very small space, and has so prepared and placed gynæcology before the reader as to make it very interesting to physicians as well as students. The book is nicely illustrated, and will be found of value, even for reference by the busy practitioner.

Boris Lensky. From the German, by OSSIP SCHUBIN. Translated by ELSIE L. LATHROP. Worthington Company, 747 Broadway, N. Y. 1891.

We have, in this work, a very interesting story translated and illustrated in such a manner as to make it very pleasing to the reader. The text is so good that it furnishes to the weary worker often a most grateful form of relaxation.

A Brave Woman. By E. MARLITT. Translated by MARGARET P. WATERMAN. With 50 photogravure illustrations. Worthington Company, 747 Broadway, N. Y. 1891.

This little book shows the special sphere of and good that a woman possesses. The book is well written, abounds in many bright points, and can be read with benefit by both sexes.

A Guide to the Practical Examination of Urine. For the use of physicians and students. By JAMES TYSON, M.D., Professor of Clinical Medicine in the University of Pennsylvania and Physician to the Hospital of the University, etc., etc. Seventh edition. Revised and corrected. With colored plate and wood engravings. 1891. P. Blakiston, Son & Co., 1012 Walnut Street, Philadelphia.

The author of this work, that has passed through seven editions, is the best known writer on this subject and one of the ablest practitioners. He has had much practical experience, during many years, of teaching and laboratory work, as well as at the bedside, for the examination of the urine in all phases of disease. We have alluded to former editions, and pointed out the value and service of this book alike to the student and physician. The author has brought up the work to the present time, and made all the recent additions upon our knowledge of the practical examination of the urine. The portion of the work devoted to the differential diagnosis of renal disease is both very original and contains facts of the greatest value to all practitioners.

Twelve Lectures on the Structure of the Central Nervous System. For physicians and students. By DR. LUDWIG EDINGER, Frankfort-on-the-Main. Second revised edition. With 133 illustrations. Translated by WILLIS HALL VITTUM, M.D., St. Paul, Minn. Edited by C. EUGENE RIGGS, A.M., M.D., Professor of Mental and Nervous Diseases, University

of Minnesota, Member of the American Neurological Association. 1890. F. A. Davis, publisher, Philadelphia and London.

The lectures included in this volume read almost like a novel; they attract the reader, and are both interesting and practical. The anatomical description is given in such a clear and graphic manner as to be readily grasped without any effort by the reader. The text is illustrated by wood-cuts, that assist the eye quickly in understanding the subject. The editors have accomplished their work well by good suggestions upon the text, and the publisher has brought out the work in a most acceptable manner for the reader, the paper binding and cuts all being good, for the small sum of $1.75 net for the work.

Saunders' Question Compends, No. 2. Essentials of surgery, together with a full description of the handkerchief and roller bandage. Prepared especially for students of medicine. By EDWARD MARTIN, A.M., M.D, Instructor in Operative Surgery, University of Pennsylvania, etc. Illustrated. Fourth edition. Revised and enlarged, Philadelphia, W. B. Saunders, 913 Walnut Street. 1891.

Books that reach a fourth edition certainly have much upon their pages to recommend them. It certainly appears to be the case in this excellent hand-book, which will be of value to both surgeons and students. The subjects are well divided and well expressed. Much attention is devoted, with credit to the author, to antiseptic surgery. An appendix at the end of the work contains very many formulæ for the medical treatment of surgical affections.

Diabetes: its Causes, Symptoms, and Treatment. By CHARLES W. PURDY, M.D., editor. With clinical illustrations. Philadelphia and London: F. A. Davis, publisher. 1890.

This work is of the most practical of the Physicians' and Students' Ready Reference Series. It is No. 8 of this list, and covers, in eight sections, all that pertains to the management and treatment of diabetes. One of the very best portions of the book is included in Section VI, which relates to the general dietetic and medicinal treatment of this disease. Dr. Purdy gives a list of foods permitted and prohibited, which is of value as a reference. Among the remedies recommended in this section, opium heads the list, followed with antipyrin, the bromides, ergot, arsenic, iodoform, jambul, oxygen, and the alkalies. The treatment of complications and special symptoms, especially constipation, furuncles, and diabetic coma, are most satisfactory and ably given.

Diseases of the Digestive Organs in Infancy and Childhood, with chapters on the Investigation of Disease, the Diet and General Management of Children, and Massage in Pædiatrics. By LOUIS STARR, M.D., Physician to the Children's Hospital of Philadelphia, etc. Second edition. Illustrated. Philadelphia: P. Blakiston, Son & Co., 1012 Walnut Street. 1891.

The second edition of this work has been increased in usefulness by the addition of a section on urine alterations, a chapter on massage in pædiatrics, and an account of second dentition and its influence on the health in late childhood. The careful and practical consideration of massage in this edition is of much utility. Another subject that alone should recommend the book is that on feeding, so well and ably given in Section II. The general and special rules for feeding, with the happy and effective combinations of food, are of great value. The work includes very many good formulæ for the treatment of diseases of childhood, and the entire work is of practical use to all physicians.

Manual of the Domestic Hygiene of the Child. For the use of students, sanitary officials, teachers, and mothers. By JULIUS UFFELMANN, M.D., Professor of Internal Medicine at the University of Rostock. Translated by HARRIOT R. MILINOWSKI, and edited by MARY PUTNAM JACOBI, M.D. G. P. Putnam's Sons, 27 West Twenty-third Street, and 27 King William Street, Strand. New York and London. The Knickerbocker Press. 1891.

A very excellent companion to the work just reviewed by Dr. Starr is the one on this very interesting topic. The author gives also much attention to the methods of nourishment of an infant. All forms of food are carefully considered at all ages, and also the result of excessive feeding. In this same subject the author justly gives attention to the care of the mouth and teeth. Chapter IV is likewise of much importance, inasmuch as it treats of the care of the skin, the subject greatly neglected by nurses as well as mothers. Here we find the author lays much stress upon the care of the hair and nails, which will assist in making better-looking men and women if the suggestions be properly carried out. The succeeding chapters upon the care of the respiratory organs, the osseous, muscular, and nervous systems, furnish the reader with much information of the greatest use to children. Dr. Mary Putnam Jacobi, who edits this work, has added many valuable suggestions. This woman physician, who has much literary skill and attainment, is also a practitioner of great clinical experience, and all that she has added will be found of the greatest value to physicians as well as mothers.

COMMERCIAL NEWS.

Popular Faith in Alteratives.

Since the nature of the action of this class of remedies is, to some extent, as yet undetermined and obscure, they are necessarily prescribed empirically. To this fact is, perhaps, due the promiscuous use by the public, not infrequently with the indorsement of physicians, of a host of nostrums of no real medicinal value. Many of these have had an enormous sale,—indicative not so much of their worth as of the general belief in the necessity for the use of what are popularly termed "blood purifiers." Spring is the season when these are most generally resorted to.

When we consider that there is no condition of disease at some stage of which tonic alteratives are not indicated, it will be appreciated that next to agents such as opium and quinine, the action of which is specific, no class of remedies is more frequently demanded.

Messrs. Parke, Davis & Co. supply, under the name of Syrup Trifolium Compound, an alterative formula containing red clover, stillingia, cascara amarga, burdock root, poke root, prickly-ash bark, berberis aquifolium,—all valuable vegetable alteratives, either with or without potassium iodide. This has been used by physicians with much success in all conditions requiring alterative treatment.

The Best Galactagogue.

At the New York Infant Asylum we have used Nutrolactis for nearly two years. We have had a number of women whose supply of milk was insufficient for one child, but on taking Nutrolactis they had plenty of milk to nourish two infants. It is the best galactagogue I have employed. Robert Millbank, M.D.,

Visiting Physician to the New York Infant Asylum.

John Muir, M.D., Member College Physicians and Surgeons, Ontario, Canada, Ex-Vice-President Ontario Medical Council, says:—

"I take pleasure in saying that I have found Papine (Battle) prompt, efficacious, and, better still, unobjectionable as to after-effects. A patient, more than usually intolerant of other preparations of opium, has borne it well, and derived manifest benefit from its use."

Pierrepont Manor, N. Y.

For Sale.

$4000 practice, no competition. Located in Western Penna. town, fine farming country, near natural-gas wells, and convenient to railroad. Majority of population property-holders. Good two-story house and all necessary outbuildings. Forty cases of obstetrics. No competition. Price, four thousand dollars ($4000), easy terms. Address,

Opportunity,
Care "Medical Bulletin,"
Philadelphia, Pa.

Echoes from the Berlin International Medical Congress.

The delegates to the Tenth International Medical Congress, held in Berlin last year, from the 5th to the 11th of August, found themselves in the home of the Johann Hoff's malt extract, the manufactory being situated at Neue, Wilhelmstrasse, No. 1, and were afforded abundant opportunities to visit, investigate, and convince themselves. The United States was liberally represented at this congress; every part of the Union sent in its delegates, and it would appear that every one of these visited the headquarters of Johann Hoff's malt extract, for the visitors were requested to register their names, and the list, in fac-simile, has been printed in pamphlet by Messrs. Eisner & Mendelson Co., the sole agents in the United States.

The reason that the Eisner & Mendelson Co. take a special pride and pleasure in the signatures of these physicians is, that they regard it as a refutation of the claims that have been made in this country for some years that Johann Hoff was a myth; that there was no firm of Johann Hoff prior to 1880; that Hoff's malt extract was made in this country and not in Europe, and that the goods sold as Johann Hoff's malt extract were fraudulent. The physicians came to Berlin, and saw with their own eyes the breweries of Johann Hoff's malt extract; tasted with their own lips the invigorating products of the laboratories; heard from many witnesses that Johann Hoff's malt extract was made in that place thirty years ago, and received abundant proof that the Eisner & Mendelson Co. were the sole agents in the United States for Johann Hoff's malt extract.—*From the Oil, Paint, and Drug Reporter.*

(For continuation see advertising page 18.)